FW: Winnebago GMZ App

Brad Hunsberger to: Bernard Schorle 05/08/2012 02:23 PM

Cc: Tom Hilbert

From: Brad Hunsberger <bhunsberger@andrews-eng.com>

To: Bernard Schorle/R5/USEPA/US@EPA

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1 attachment

GMZ Eval-2 (5-1-2012).pdf

Bernie,

Pursuant to my conversation with Tom Hilbert, the Five-Year Status Report and Evaluation of Groundwater Corrective Actions and Groundwater Management Zone for the Winnebago Landfill is attached in PDF. The subject report was submitted to the Illinois EPA on May 1. If you have any questions or comments, please contact Tom.

Thank you.

Brad J. Hunsberger, LPG
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ANDREWS ENGINEERING, INC. 90-1142010/20

May 1, 2012

Stephen F. Nightingale
Manager, Permit Section
Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

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Re: 2018080001 – Winnebago County
Winnebago Landfill – Northern Unit
Status Report and Evaluation of Groundwater Corrective Actions and Groundwater Management Zone

Dear Mr. Nightingale:

On behalf of Winnebago Landfill, submitted herein are an original and three copies of a Status Report for the Groundwater Corrective Actions in accordance with Condition VIII.23 of Permit No. 1991-138-LF, Modification 53. Application forms (Certification of Authenticity and LPC-PA1) are provided in Appendix A of the application.

Please contact Tom Hilbert at (815) 963-7516 if you have any questions or require additional information.

Sincerely,

Joshua L. Rhoades

Joshua L. Rhoades, LPG
Hydrogeologist

JLR:jlr:sjb

Enclosure

cc: Tom Hilbert – Rock River Environmental Services
Evan Buskohl – Rock River Environmental Services
Bernie Shorle – US EPA Region 5

Winnebago Landfill
Northern Unit
Winnebago County, Illinois

Permit Number: 1991-138-LF
Site Number: 2018080001

Status Report and Evaluation of Groundwater Corrective Actions and Groundwater Management Zone

May 2012

Submitted to:
Illinois Environmental Protection Agency
Bureau of Land
Springfield, Illinois

Prepared for:
Winnebago Landfill
8403 Lindenwood Road
Rockford, Illinois

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1. INTRODUCTION

Condition No. VIII.23 of Permit No. 1991-138-LF, Modification No. 53 requires an evaluation and report of the current status of the groundwater management zone (GMZ) based on existing corrective actions for the Northern Unit. The application forms (Certification of Authenticity and LPC-PA1) are contained in Appendix A. The subject condition, a result of approval of the permit renewal application dated December 2002 and identified as Illinois Environmental Protection Agency (Illinois EPA) Application Log No. 2002-373, states:

> *The operator shall provide status reports on the groundwater corrective actions, which shall identify the current state of the groundwater management zone (GMZ) via the remedial performance-monitoring program and evaluation of groundwater quality. The report shall include, at minimum, the current groundwater remediation activities, groundwater quality of all wells contained within the GMZ, trend analysis data in graphical and tabular formats for all GMZ parameters and wells, vertical and horizontal GMZ extent maps and cross sections, potentiometric maps, conclusions and recommendations of the GMZ. The report shall be submitted as a Significant Modification Application to the Permit no later than May 1, 2012, in accordance with the 1995 Record of Decision. Future evaluations of the groundwater corrective action will be submitted to the Illinois EPA as an Application for Significant Modification to the Permit on the same schedule as the submittal date for the "Five Year Review Report for Pagel's Pit Superfund Site", which is required by the USEPA.*

As required by Condition No. VIII.23, this report includes a review of current groundwater remediation activities, groundwater quality of all groundwater monitoring wells contained within the GMZ, trend analysis data in graphical and tabular formats for all GMZ parameters and wells, vertical and horizontal GMZ extent maps, cross-sections, potentiometric surface maps, and recommendations for the GMZ if necessary.

The Northern Unit has a history of groundwater quality investigations due to the conditions of the Acme Solvent Superfund Site (Acme Solvent site) and elevated concentrations related to the waste unit. Results of previous groundwater quality investigations in addition to the remedial performance monitoring program were utilized to determine the current status of the corrective actions and GMZ (i.e., effectiveness of the remedial measures and extent of groundwater impacts adjacent to the Northern Unit). Although some data (i.e., groundwater elevations and analytical results) from the North Expansion Unit (NEU) and Southern Unit have been used to characterize the hydrogeology for the Northern Unit, the NEU and Southern Unit are not specifically discussed as part of this application as the GMZ and remedial activities are not applicable to these disposal areas.

1.1 Background Information and Previous Submittals

Winnebago Landfill, located approximately five miles south of Rockford, Illinois, consists of three separate disposal areas (NEU, Northern Unit, and Southern Unit) authorized under two different operating permits (Illinois EPA Permit No. 2006-221-LF for the NEU and 1991-138-LF for the Northern and Southern Units). The Northern Unit, previously known as Pagel's Pit and the subject of this application, is located between the existing Southern Unit and NEU. A site map delineating the disposal areas has been provided as Figure 1.

The Northern Unit was added to the National Priorities List in June 1986 due to upgradient groundwater contamination resulting from the Acme Solvent site. Based on perceived groundwater contamination adjacent to the Northern Unit (at the Acme Solvent site), the United States Environmental Protection Agency (U.S. EPA) issued a Record of Decision (ROD) in June 1991 requiring Remedial Design and Remedial Action plans. The ROD was incorporated in a Consent Decree entered in the United States District Court for the Northern District of Illinois, Western Division, Case No. 92-C-20346 on February 11, 1993. A ROD amendment was submitted to the U.S. EPA in 1997 for a new or revised Consent Decree to reflect a new Statement of Work (SOW) due to a change in the remedy. The subject ROD was issued in 1999 (signed on September 30, 1999) and acknowledged that the U.S. EPA's response at the site was complete thereby achieving construction completion. The Northern Unit currently exists with a GMZ and approved remediation program. The remediation program was submitted July 10, 1995 (Illinois EPA Application Log No. 1995-250) to facilitate compliance of the Northern Unit with the applicable requirements of 35 Illinois Administrative Code (Ill. Adm. Code) Part 811 and 812, pursuant to Sections 814.104, 814.301 and 814.302.

Previous groundwater quality evaluations to determine the effectiveness of the remedial measures were submitted by HSI GeoTrans in 1998 and 1999 in accordance with the schedule provided in Illinois EPA Application Log No. 1996-403. The annual progress reports, which included an assessment of groundwater quality, were based on the remedial performance groundwater monitoring plan (HSI GeoTrans, 1997) and conducted in accordance with the Performance Assessment Criteria (PAC) provided in the May 8, 1997 addendum to the Illinois EPA application dated January 14, 1997. The PAC includes evaluation of concentration trends at wells near the landfill and at the boundary of the dissolved plumes. This entails a statistical trend analysis for each subject parameter to determine movement of the plumes. The August 1999 report (HSI GeoTrans) concluded that a small number of inorganic parameters were still present beneath and downgradient to the Northern Unit. Organic concentrations were very low, near, or below the applicable groundwater quality standards (AGQSs) throughout the GMZ. At the time of the 1999 report, remediation measures were still being implemented. Therefore, it was recommended that quarterly sampling and analysis continue for the 33 wells and 3 stream monitoring points in the remedial performance groundwater monitoring plan.

The Pagel's Pit Superfund Site First Five-Year Review Report, prepared by U.S. EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121 and the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Part 300), was completed in September 2002. The impetus for the statutory review was the reported initiation of the remedial action on August 8, 1997; the date for the formal acceptance of the design for the closure of part of the landfill. The assessment determined that the remedy was constructed in accordance with the two RODs and functioning as anticipated. However, the conclusion of the first five-year report was that the remedy at the site was not protective in the long-term because the additional institutional controls specified by the second ROD had not yet been implemented at the time of review.

The initial Status Report for the groundwater corrective action and evaluation of the GMZ was submitted July 2004 by Andrews Engineering as Illinois EPA Application Log No. 2004-257. The subject application, submitted pursuant to Condition No. VIII.22 of Permit No. 1991-138-LF Modification No. 24, was the result of approval of the permit renewal application dated December 2002 and identified as Illinois EPA Application Log No. 2002-373. The GMZ evaluation was approved September 28, 2005 with the issuance of Permit Modification No. 28. The application concluded that although a few parameters were still showing increasing trends, improvements to the groundwater quality were evident as demonstrated by a decrease in the overall GMZ extents. Furthermore, the organic constituents that prompted the remedial actions were typically not detected in downgradient groundwater monitoring wells.

The Pagel's Pit Superfund Site Second Five-Year Review Report, prepared by U.S. EPA, was completed in August 2007 in accordance with the signing of the first five-year review on September 27, 2002. The assessment determined that the remedy was constructed in accordance with the two RODs and the ROD amendment that was part of the second ROD.

A Status Report for the groundwater corrective action and evaluation of the GMZ was submitted May 1, 2007 by Andrews Engineering as Illinois EPA Application Log No. 2007-181. The subject application, submitted pursuant to Condition No. VIII.22 of Permit No. 1991-138-LF Modification No. 33, was approved October 31, 2008 with the issuance of Permit Modification No. 37. The application concluded that significant improvements to the groundwater quality were evidenced by decreases in individual parameter concentrations and corrective measures had been successful in source reduction as evidenced by the decreased GMZ extents (compared to the 2004 GMZ evaluation). In accordance with the September 29, 2008 addendum of Illinois EPA Application Log No. 2007-181 (2007 Status Report), a GMZ Investigation Report addressing Condition VIII.23 of Modification No. 37 was submitted May 1, 2009. The GMZ investigation identified as Illinois EPA Application Log No. 2009-221 and approved July 29, 2009 with the issuance of Permit Modification No. 40, included advancement of borings in four locations along the western edge of the GMZ within the floodplain of Kilbuck Creek. Although the results of the GMZ investigation were that groundwater quality to the west of the GMZ did not appear to be affected by the Northern Unit, issues with the turbidity of the groundwater and sampling methodology warranted additional investigation. The additional GMZ investigation, identified as Illinois EPA Application Log No. 2010-038, was submitted January 29, 2010 addressing Condition VIII.23 of Modification No. 40. The additional GMZ investigation was approved September 22, 2011 with the issuance of Permit Modification No. 50. Based on the results of both GMZ investigations, groundwater quality to the west of the GMZ did not appear affected by the Northern Unit. Concentrations of all organic and inorganic GMZ parameters were non-detect or below the AGQS with the exception of dissolved ammonia at T2U-A, T2L-A, and T3U-A. The dissolved ammonia concentrations were determined to be affected by background conditions and spatial variability associated with the agricultural land use of the area.

2. SITE HYDROGEOLOGICAL SUMMARY

2.1 Unconsolidated Deposits

The composition of the unconsolidated deposits, which appear to be glacial outwash, varies with location throughout the boundaries of Winnebago Landfill. Coarse-grained sand and gravel with occasional silt and/or clay seams typically underlie the site. The thickness of the sand and gravel varies from just a few feet along the eastern side of the facility to approximately 70 feet beneath the western edge. The sand and gravel, which thickens to the west corresponding with the erosion of the dolomite bedrock, directly underlies the western portion of the Northern Unit while fractured dolomite underlies the eastern portion. A geologic cross-section illustrating the subsurface geology is provided as Figure 2.

2.2 Bedrock

The bedrock consists of dolomite, fractured and weathered, to varying extents. Chert layers, chert nodules, and small vugs were commonly noted on facility boring logs. However, larger voids or karst characteristics were not indicated on the boring logs. The bedrock surface is highly variable throughout the facility. East of Winnebago Landfill a dolomite bedrock upland is present and outcrops in the vicinity of the Acme Solvent site and two quarries. This bedrock upland represents the eastern bedrock escarpment of the Upper Rock buried valley; Winnebago Landfill is situated on the eastern edge of the Upper Rock buried bedrock valley. The overburden thickens as the elevation of the bedrock surface decreases to the west. As determined by previous boring investigations, the bedrock continues to decrease in elevation west of Winnebago Landfill to approximately 645 feet above mean sea level (MSL) directly west of Kilbuck Creek (HSI GeoTrans, May 1997). A geologic cross-section illustrating the subsurface geology is provided as Figure 2.

2.3 Uppermost Aquifer

The uppermost aquifer for Winnebago Landfill is located within the glaciofluvial sand and gravel deposits and the upper portion of the fractured dolomite bedrock. The saturated sands and gravels, which directly overlie the bedrock, occur over the western two-thirds of the Northern Unit. In locations where there are no saturated glaciofluvial deposits, the uppermost aquifer is located within the dolomite bedrock; this occurs in the eastern one-third of the Northern Unit.

2.4 Groundwater Flow Conditions

The general flow direction within the uppermost aquifer is to the west-northwest and downward in the bedrock upland located to the east as shown by quarterly potentiometric surface maps provided in Appendix B. The vertical gradient for flow, although typically slight at any individual location, is generally upward from the bedrock to the unconsolidated sediments in areas where sediments are saturated (HSI GeoTrans, 1995 report for the Northern Unit at Winnebago Landfill). Therefore, groundwater elevations from the bedrock wells and wells screened in the unconsolidated materials (sand and gravel) were used to create one potentiometric surface for each quarterly sampling period. The existence of a slight vertical gradient within the uppermost aquifer is due to the higher elevations of the recharge areas to the east and greater permeability of the sand and gravel deposits overlying the bedrock.

The Northern Unit GMZ is located in the vicinity of Kilbuck Creek; typically a gaining stream that receives recharge from shallow groundwater but may be a losing stream during drier periods where the water table drops below the creek. This seasonal fluctuation allows mixing of surface water with shallow groundwater, often on a seasonal and precipitation event-specific basis. A geologic cross-section is provided as Figure 2 illustrating the direct hydraulic connection between the surface water (Kilbuck Creek and the wetland mitigation area) and the underlying sand and gravel deposits. Surface water samples from Kilbuck Creek are collected from three locations on a quarterly basis and analyzed for all the GMZ list parameters. However, during first quarter 2012, water samples were unable to be obtained from locations SG1 and SG4 due to frozen conditions. Table 1 lists the creek sample results for the review period.

Construction dewatering operations at the NEU, initiated in order to construct the invert of the NEU and negate any hydraulic uplift forces during construction and initial filling of the unit, commenced fourth quarter 2007. In areas where the landfill liner was and is being constructed, the potentiometric surface elevation has been lowered using vertical extraction wells and belowgrade dewatering sumps around the perimeter of the construction area. The dewatering wells are decommissioned after sufficient waste has been placed to balance the buoyant force of the water, and additional wells are added as landfill development progresses. Construction dewatering operations at the NEU prompted the submittal of a Groundwater Investigation of Construction Dewatering (Illinois EPA Application Log No. 2011-197) approved November 2, 2011 by Modification No. 15 to Permit No. 2006-221-LF. The Groundwater Investigation of Construction Dewatering was prepared to address Condition No. VIII.24 of Permit No. 2006-221-LF in order to determine what effects the construction dewatering activities may have had on the groundwater flow direction with respect to groundwater in the vicinity of the NEU, specifically at the location of Northern Unit Compliance Boundary Wells G52M, G52S, and Temporary GMZ Assessment Wells T1U-A, T2U-A, T3U-A, T1L-A, T2L-A, and T3L-A. It should be noted that Temporary GMZ Assessment Wells T1U-A and T1L-A, installed to investigate the area west of the permitted Northern Unit GMZ pursuant to Condition No. VIII.23 of Permit No. 1991-138-LF Modification No. 41, were renamed G54S and G54M, respectively, in accordance with Modification No. 50 to Permit No. 1991-138-LF. It should be further noted that Condition VIII.9.A of Modification No. 50 to Permit No. 1991-138-LF removed the Temporary GMZ Assessment Well listing.

The Groundwater Investigation of Construction Dewatering included data from a comprehensive hydrogeologic investigation that was conducted west and northwest of the Southern and Northern Units as part of the facility expansion (Illinois EPA Application Log Nos. 2006-221 and 2010-221). A series of piezometers were installed in the area identified as the Western Expansion Unit. This area is located south of Northern Unit Compliance Boundary wells G52S, G52M, G54S, G54M and Temporary GMZ Assessment Wells T2U-A, T2L-A, T3U-A, and T3L-A. Additionally, groundwater elevation data from wells in the vicinity of the Acme Solvent site were used in the compilation of potentiometric contours. The potentiometric surface information from the Western Expansion Unit piezometers and wells in the vicinity of the Acme Solvent site included data from April 2004, March 2005, and April 2006.

The potentiometric surface maps from third quarter 2007 to first quarter 2011 were provided in Illinois EPA Application Log No. 2011-197 and have been included in Appendix B of this report. Potentiometric surface maps for first and second quarter 2007 as well as second quarter 2011 to fourth quarter 2011 have also been provided. The potentiometric surface maps illustrate a temporary cone of depression (inward radial flow) created by construction dewatering. Although the potentiometric surface maps indicate dewatering activities have changed the groundwater flow characteristics for downgradient NEU monitoring wells, causing monitoring wells along the north and northwest sides of the NEU to receive water from the north and west of the NEU in addition to the south and east (upgradient), comparison of potentiometric surface maps prior to and subsequent to initiation of construction dewatering activities indicate groundwater movement in the vicinity of the subject wells has not been significantly affected. A consistent gradient and flow direction (northward) have been maintained in the area of the Northern Unit GMZ prior to and subsequent to construction dewatering activities as illustrated by the equipotential lines (contours) on the potentiometric surface maps near the subject wells. Furthermore, groundwater elevations in Northern Unit GMZ wells G37S and G37D only vary minimally, and are consistent prior to and subsequent to initiation of dewatering activities. Kilbuck Creek and the wetland mitigation area may buffer the potential drawdown in the vicinity of the creek due to construction dewatering activities in the NEU.

The Groundwater Investigation of Construction Dewatering also utilized groundwater elevation data obtained from both Winnebago Landfill and the Acme Solvent site to determine dewatering effects east and southeast of the NEU. A series of wells and piezometers east of Lindenwood

Road are monitored for quarterly groundwater elevations as part of the remediation system monitoring. The most recent set of data was presented in the LTRA Performance Evaluation Report (July 1 to December 31, 2010). Potentiometric surface maps were presented in Figure 1 of the LTRA report, dating from the third quarter 2007 to the third quarter 2010. The subject data transcend activation of the dewatering wells at the NEU (fourth quarter 2007). As shown, the contours contained in Figure 1 of the LTRA report (provided herein as Appendix C) are consistent prior to and subsequent to initiation of dewatering activities. This indicates the extent of influence did not encroach on the Acme Solvent site to the southeast of the NEU and east of the Northern Unit.

3. GROUNDWATER MONITORING WELL NETWORK

The facility has an extensive system of groundwater monitoring wells from which groundwater data are obtained. Pursuant to Permit No. 1991-138, the groundwater monitoring wells are divided into two differentiable networks: one for the Northern Unit and one for the Southern Unit. The Northern Unit network currently contains 33 groundwater monitoring wells. Of those, five are designated as upgradient wells, 14 monitor the zone of attenuation (ZOA), and one is a compliance boundary well at the edge of the ZOA. Winnebago Landfill samples 13 additional wells on a quarterly basis as part of the GMZ monitoring network. The Northern Unit GMZ wells are listed in Table 2 and shown in Figure 1.

The Southern Unit currently contains 17 groundwater monitoring wells. Of the 17 groundwater wells, six are designated as upgradient wells (two of which are Northern Unit upgradient wells) and 11 monitor the ZOA. Although some data (i.e., groundwater elevations and analytical results) from the NEU and Southern Unit have been used to characterize the hydrogeology for the Northern Unit, the NEU and Southern Unit are not specifically discussed as part of this application as the GMZ and remedial activities are not applicable to these disposal areas.

4. GROUNDWATER CORRECTIVE ACTION

4.1 Groundwater Management Zone (GMZ)

The results of historical groundwater sampling at Winnebago Landfill indicated that impacted groundwater was present beneath and downgradient to the Northern Unit. Elevated levels of inorganic compounds and organic solvents were detected, which prompted the 1995 applications for a GMZ. Although organic compounds were previously detected within the GMZ, the actual boundaries were determined by inorganic concentrations. The GMZ delineated the three-dimensional extent of groundwater that exhibits concentrations in excess of the AGQSs and was defined by the furthest extent of constituents above those standards.

In the 1995 applications, chloride and ammonia were chosen to demarcate the GMZ boundary because the extent of the elevated concentrations of these compounds incorporated the largest area. Two zones (Upper and Lower Zones) were developed in order to address differences in groundwater quality exhibited between the upper and lower parts of the sand and gravel aquifer. The limit of the GMZ was determined not to extend to the dolomite bedrock since no contaminants were detected in bedrock wells downgradient of the waste unit. Although only slight differences in hydraulic head existed between the bedrock and the Upper Zone, groundwater quality indicated appreciable differences in concentrations. These variations were likely due to the slight upward flow from the bedrock to the lower sand and gravel in addition to the different flow regimes between the Upper and Lower Zones. As noted in Section 2, shallow groundwater normally discharges to Kilbuck Creek while deeper groundwater flows beneath the creek. The limits identified in 1995 for the upper and lower zones are shown in Figures 3 and 4, respectively.

The remedial measures and remedial performance monitoring program implemented pursuant to U.S. EPA guidelines were also the chosen remedial actions for the GMZ and were incorporated into the 1995 Permit Renewal and GMZ applications (Illinois EPA Application Log Nos. 1995-250 and 1996-058, respectively). The remedial measures, consisting of source reduction and natural attenuation, were implemented pursuant to a 1997 ROD Amendment for a new or revised Consent Decree, which reflected a new SOW due to a change in the remedy (issued in 1999). Source reduction was accomplished via three corrective measures: construction of a final cover; installation of additional leachate extraction wells; and installation of a gas extraction system. The concentrations of chlorinated compounds attributable to the Acme Solvent site decreased significantly during the 1990s due to the installation and operation of various remedial systems upgradient of the landfill at the Acme Solvent site. As such, the remedies designated for these compounds for the Northern Unit were deemed unnecessary.

The final cover for the Northern Unit was constructed in two phases. The western portion was completed in 1998 and the eastern portion in July 2001. The final cover inhibits infiltration of precipitation, thereby significantly reducing leachate production. A collection system, which includes 35 vertical dual gas/leachate extraction wells, was also installed with the recovered gas being directed to a flare system and leachate to storage tanks. Subsequent to completion of the final cover placement, the gas extraction system was modified in late 2002 to include a larger capacity system (2,500 cfm system vs. the initial 1,000 cfm system). This system enhancement considerably increased the efficiency of the gas extraction system.

The GMZ boundaries, as depicted in 1995, were based on one set of data (March 1995) obtained while the Northern Unit was active (four years prior to initial closure activities). A re-evaluation of the GMZ was conducted in 2004 pursuant to Condition VIII.22 of Permit No. 1991-138-LF, Modification No. 24. The evaluation was submitted July 15, 2004 as Illinois EPA Application Log No. 2004-257 (approved by Permit Modification No. 28). The results of the evaluation indicated that the large majority of GMZ parameter concentrations substantially decreased, many to levels below the permitted AGQSs. Revised GMZ boundaries were similar to those depicted in 1995, although the 2004 perimeter was extended to encapsulate a small number of wells that were not included within the initial GMZ. The revision included extending the lower boundary of the GMZ in the vicinity of upgradient well G09D (and former well G14D) to include the upper portion of the dolomite bedrock. Dissolved ammonia and dissolved boron were chosen to demarcate the GMZ boundary because the extent of the elevated concentrations of these compounds incorporated the largest area. The use of dissolved ammonia and dissolved boron superseded the use of dissolved chloride as an indicator of leachate-derived compounds due to the other potential chloride sources (road salt, water softeners, etc.) within the vicinity of the facility. The horizontal extents of the GMZ (2004) for the upper and lower zones are provided in Figures 5 and 6, respectively.

The changes in the boundaries/extent from 1995 to 2004 were not an indication of the effectiveness of the remediation program. When comparing the differences between the 1995 and 2004 GMZ boundaries, the operational status of the Northern Unit and the amount of available data were considered. In 1995, the Northern Unit was fully operational with no closed areas and the GMZ boundaries were determined from one sampling event. Six additional years of waste disposal occurred prior to the completion of the closure activities. Final cover placement began in 1999 and was completed in July 2001. Additional closure activities were completed in 2002 with the revision of the leachate/gas extraction system. The Groundwater Impact Assessment (GIA [1995]), which evaluated the natural attenuation/degradation remediation method, assumed steady-state conditions after completion of the closure activities and estimated five to ten years for cleanup to achieve background conditions.

As stated previously in Section 1, a re-evaluation of the GMZ was conducted in 2007 pursuant to Condition VIII.22. The re-evaluation was submitted May 1, 2007 as Illinois EPA Application Log No. 2007-181 (approved by Permit Modification No. 37). The results of the re-evaluation indicated that although a few inorganic parameters were still detected at concentrations above backgrounds, significant improvements to groundwater quality were evident as demonstrated by the decreases in individual parameter concentrations and GMZ extents. In addition, the organic constituents, which prompted the remedial actions, were typically not detected in groundwater downgradient of the facility during the review period. Revised GMZ boundaries were similar to those depicted in the 2004 evaluation. Although decreases in the GMZ extent and parameter concentrations were demonstrated in Illinois EPA Application Log No. 2007-181, the Illinois EPA requested further characterization of the western boundary of the GMZ.

In accordance with the September 29, 2008 addendum to Illinois EPA Application Log No. 2007-181, further characterization of the western boundary of the GMZ was submitted May 1, 2009 as Illinois EPA Application No. 2009-221 (approved by Modification No. 40). Based on the results of the GMZ investigation, groundwater quality to the west of the GMZ appeared unaffected by the Northern Unit. However, due to issues with the turbidity of the groundwater and sampling methodology, additional investigation was proposed. As a result of the issuance of Modification No. 40, Condition VIII.23 was revised requiring the installation of temporary investigation wells T1U-A, T1L-A, T2U-A, T2L-A, T3U-A, and T3L-A. In accordance with Condition VIII.23 of Modification No. 40, the results of the GMZ investigation report, submitted January 29, 2010 as Illinois EPA Application Log No. 2010-038 (approved by Permit Modification No. 50), indicated that concentrations of all organic and inorganic GMZ parameters, with the exception of dissolved ammonia, were non-detect or below the AGQS at T2U-A, T2L-A, and T3U-A. However, the investigation results indicated that dissolved ammonia concentrations west of Kilbuck Creek may be affected by background conditions and spatial variability, possibly associated with the agricultural land use of the area, and not fully represented by the Northern Unit AGQS.

Addendums 1 and 2 to Illinois EPA Application Log No. 2010-038, submitted September 16, 2010 and June 14, 2011, respectively, provided a comprehensive evaluation regarding the direction of groundwater movement in the vicinity of Northern Unit Compliance Boundary wells G52S and G52M, including the Northern Unit GMZ temporary investigation wells. An additional evaluation was performed in response to Condition VIII.24 of Permit No. 2006-221-LF, identifying the extent of influence of construction dewatering activities in the NEU, specifically in the vicinity of Northern unit Compliance Boundary wells G52S and G52M and temporary investigation wells T1U-A, T1L-A, T2U-A, T2L-A, T3U-A, and T3L-A (see discussion Section 2.4). Based on the evaluation, a northerly groundwater movement was maintained in the subject area prior to and subsequent to initiation of construction dewatering activities in the NEU due to Kilbuck Creek and the wetland mitigation area acting as a buffer against potential drawdown. As a result of consistent northerly groundwater movement, the dissolved ammonia concentrations in the groundwater west of Kilbuck Creek were determined to be affected by conditions present to the south and southeast and not the result of the Northern Unit. Further investigation for the dissolved ammonia exceedences at temporary investigation wells T2U-A, T2L-A, and T3U-A was refuted citing that dissolved ammonia sources other than the landfill are evidenced by: concentrations of dissolved ammonia upgradient to the facility waste units exceeding concentrations downgradient to the waste units during the December 2009 GMZ investigation; lack of additional indicator parameter exceedences during the GMZ investigation; and a demonstration that the Temporary GMZ Assessment Wells located west of Kilbuck Creek receive water from the south and southeast and are influenced by mixing of surface water and groundwater.

4.2 Remedial Performance Monitoring

The remedial performance monitoring program is the nomenclature used to describe the additional efforts implemented to further define the status of the groundwater quality adjacent to the Northern Unit. As stated above in Section 3, the program consists of 33 groundwater monitoring wells and 3 stream gauge locations located on Kilbuck Creek. More than one well designation exists for many of the wells; however, this evaluation will utilize the Illinois EPA designations for all references and drawings, where appropriate.

The subject wells were installed to access groundwater at three general intervals of the saturated deposits or dolomite bedrock. In areas where the saturated sand and gravel deposits are thick, multiple screen intervals (nested wells) exist, providing access to shallow and deep intervals within the deposit as well as the bedrock. This was necessary to monitor potential movement of contaminants at multiple vertical intervals within the saturated medium. The wells have been sampled quarterly and analyzed for List G1 parameters. Annually, the wells have been sampled and tested for an expanded list (List G2). Results of the analyses are discussed in Section 5 below.

5. GROUNDWATER QUALITY

5.1 Background Groundwater Quality

Quarterly and annual groundwater quality results are evaluated based on the statistical interwell background concentrations, or AGQSs, in accordance with Illinois EPA Permit No. 1991-138-LF. The AGQSs for the facility were derived from upgradient wells G09M, G09D, G13S, G13D and G20D. Impacts on background groundwater quality by releases from the Acme Solvent site have been well established in previous investigations and residual effects are occasionally observed. Table 3 lists the wells and parameters in which concentrations have exhibited exceedences above the AGQS since the previous GMZ evaluation for the Northern Unit.

5.2 Trend Analyses

Historical trend analyses were conducted for the GMZ parameters in the GMZ wells. Parameters not currently exceeding the AGQS and displaying no significant trends since the 2007 GMZ evaluation are not discussed below. As previously discussed, three zones have been delineated, an Upper Zone, a Lower Zone, and the Bedrock Zone. Trend graphs for parameter concentrations from groundwater monitoring wells in each zone, compiled from data obtained from the initial sampling event for each well through first quarter 2012, are presented in Appendix D, Appendix E, and Appendix F, respectively. Data utilized to construct the graphs is provided in tabular format in Table 4. Since routine monitoring of the GMZ began with the issuance of the 1995 permit renewal application and GMZ application (approved in August 1996) the data prior to issuance of the subject applications are not included due to their sporadic collection. Data prior to 1997 were presented in Table 4 of the 2004 GMZ Evaluation (Illinois EPA Application Log No. 2004-257).

5.2.1 Upper Zone

The Upper Zone of the GMZ generally ranges from an elevation of 690 feet above MSL to the surface of the water table and is currently monitored by wells G130, G17S, G33S, G34S, G35S, G37S, G40S, G41S, G50S, G51S, G52S, G54S, R03S, and R42S. As shown in Table 2, wells G119 and G15S were replaced in December 2008 by wells G50S and G51S, respectively. The dataset analyzed ranges from first or second quarter 1997 (depending on the parameter) through first quarter 2012 with the exception of G15S, G119, and G18S, which were abandoned due to development activities of the North Expansion Unit in July 2011.

The trend analyses as described below are based on evaluation of individual parameters. Graphs depicting parameter specific concentrations are contained in Appendix D.

5.2.1.1 Parameter Specific Trends

5.2.1.1.1 GMZ Parameters

Inorganic Parameters (Upper Zone)

Ammonia as N, dissolved

Ammonia can be difficult to evaluate given that the facility is located in a rural area, susceptible to agricultural runoff containing fertilizers. Not only can fertilizer components be transported through the fractured bedrock, but they can also be transported via surface drainage into Kilbuck Creek. Given the facility hydrogeologic characteristics, constituents contained in the surface water can easily influence groundwater quality. As mentioned previously in Section 4.1, dissolved ammonia concentrations in the groundwater west of Kilbuck Creek were determined to be affected by conditions present to the south and southeast and not the result of the Northern Unit. Further investigation for the dissolved ammonia exceedences at Temporary GMZ Assessment Wells T2U-A, T2L-A, and T3U-A was refuted citing that dissolved ammonia sources other than the landfill are evidenced by: concentrations of dissolved ammonia upgradient to the facility waste units exceeding concentrations downgradient to the waste units during the December 2009 GMZ investigation; lack of additional indicator parameter exceedences during the GMZ investigation; and a demonstration that the Temporary GMZ Assessment Wells located west of Kilbuck Creek receive water from the south and southeast and are influenced by mixing of surface water and groundwater.

As shown in the exceedence summary table for the current review period (Table 3), historic analytical data (Table 4), and trend graph (Appendix D), concentrations in several Upper Zone wells exceeded the AGQS (0.9 mg/L) before and during the current review period. Wells exhibiting stable concentrations below the AGQS are not discussed in this section.

G15S—Concentrations in well G15S have consistently exceeded the AGQS since sampling commenced first quarter 1997. The concentrations in the replacement for well G15S (G51S installed in December 2008) have also consistently exceeded the AGQS, although concentrations have been much lower. In general, concentrations in well G15S and its replacement well G51S are sporadic with no apparent increasing or decreasing trends and appear to have a component of seasonal influence, with concentrations greater during first and third quarters.

G34S—Dissolved ammonia concentrations in well G34S exhibit an overall decreasing trend from 26 mg/L during first quarter 2008 to non-detect since first quarter 2011. Concentrations have been below the AGQS since first quarter 2010.

G35S—Dissolved ammonia concentrations in well G35S exhibit an overall decreasing trend throughout the current review period from 16 mg/L during second quarter 2007 to non-detect during first quarter 2012. Concentrations in well G35S have been below the AGQS since fourth quarter 2010. As shown in Table 4, the dissolved ammonia concentrations recorded in well G35S during the current review period are lower than any concentrations recorded during previous review periods.

G37S—Concentrations in well G37S exhibit an overall stable to decreasing trend throughout the previous and current review periods. Concentrations above the AGQS were recorded at well G37S during second and third quarters 2007. However, concentrations during these two sampling events were within historic limits and lower than concentrations recorded from fourth quarter 2004 through fourth quarter 2006 (see Table 4).

G40S—Dissolved ammonia concentrations in well G40S have consistently exceeded the AGQS during the current, as well as previous, review periods. Following a slight increasing trend, which reached a maximum concentration during second quarter 2006, dissolved ammonia concentrations have been decreasing to stable.

G41S—Concentrations at well G41S have been lower than previous review periods and continue to display a significant decreasing trend. Within the current review period, the concentration of dissolved ammonia at well G41S has decreased from 35 mg/L (second quarter 2007) to 0.37 mg/L (first quarter 2012).

R03S—The concentrations of dissolved ammonia at well R03S have consistently exceeded the AGQS during previous review periods, but have been below the AGQS since fourth quarter 2010 and are currently non-detect. The decreasing trend for dissolved ammonia concentrations at well R03S has continued since third quarter 2002.

R42S—Concentrations of dissolved ammonia at R42S have historically remained stable slightly above the AGQS, a trend that continues through the current review period. Concentrations are stable and within historic limits for this parameter.

Prior to and during the current review period, concentrations of dissolved ammonia in several Upper Zone wells exceeded the AGQS. However, during the current review period, no increasing trends are displayed for any wells that have been reported exceeding the AGQS. Instead, decreasing trends are apparent for wells G34S, G35S, G37S, G40S, G41S, and R03S while a stable trend is apparent for G15S/G51S and R42S. Wells not discussed are those with dissolved ammonia concentrations stable or decreasing below the AGQS.

Arsenic, dissolved

Concentrations of dissolved arsenic from several Upper Zone wells (G15S/G51S, G18S, G40S, G41S, G52S, R03S, and R42S) have exceeded the AGQS (2 ug/L) during the current review period. The remaining wells screened in the Upper Zone exhibit stable concentrations below the AGQS.

G15S—Concentrations in well G15S have historically exceeded the AGQS until sampling ceased third quarter 2008. Sampling resumed first quarter 2009. An increasing trend is apparent at G51S with the highest concentration (12 ug/L) recorded during second and third quarters 2011.

G18S—Dissolved arsenic concentrations in well G18S exceeded the AGQS sporadically since sampling commenced first quarter 1997. The only detection of dissolved arsenic in G18S during the current review period was during second quarter 2007. As previously mentioned, well G18S was abandoned July 2011.

G40S—Concentrations of dissolved arsenic in well G40S have been non-detect or stable below the AGQS during previous review periods. During the current review period, concentrations above the AGQS were recorded during second and third quarters 2009; subsequently the concentrations decreased until the well became dry for the third quarter 2010 sampling event. Well G40S has been dry since.

G41S—Dissolved arsenic concentrations in well G41S have been above the AGQS and have increased during previous review periods. However, dissolved arsenic concentrations in well G41S have decreased significantly throughout the current review period from 38 ug/L (third quarter 2007) to non-detect since fourth quarter 2011.

G52S—Concentrations in well G52S, sampled since fourth quarter 2009, have been relatively stable below the AGQS or non-detect with the exception of sporadic detections above the AGQS during second quarter 2010 and fourth quarter 2011.

R03S—Dissolved arsenic concentrations in well R03S have historically fluctuated above the AGQS, but as shown by the trend graph (Appendix D) have decreased significantly throughout the current review period from 10 ug/L (first quarter 2007) to non-detect since first quarter 2008.

R42S—Concentrations in well R42S have consistently exceeded the AGQS during previous as well as the current review period. Although fluctuation of dissolved arsenic concentrations is prominent in well R42S, no increasing trend is apparent.

Prior to and during the current review period, concentrations of dissolved arsenic in several Upper Zone wells exceeded the AGQS. However, during the current review period, all wells with dissolved arsenic concentrations above the AGQS, with the exception of G51S, display decreasing or stable trends. Concentrations in wells G41S and R03S, which have historically exceeded the AGQS, have decreased below the detection limit during the current review period. Wells not discussed are those with dissolved arsenic concentrations stable or decreasing below the AGQS.

Arsenic is naturally occurring in groundwater and is highly sensitive to oxygen reducing conditions. The groundwater at the facility is unconfined and shallow. Movement beneath a structure (i.e., waste unit) is sufficient to cause anaerobic conditions, which can cause the arsenic concentrations to increase without any direct influence from the waste unit. Arsenic concentrations detected in downgradient wells do not necessarily indicate an impact from the waste unit.

Arsenic, total

Concentrations of total arsenic from several Upper Zone wells (G15S/G51S, G18S, G41S, G50S, G52S, G54S, R03S, and R42S) have exceeded the AGQS (10 ug/L) during the current review period. Total arsenic was sampled on an annual basis until the issuance of Permit Modification Number 28, at which time quarterly sampling commenced.

G15S—Total arsenic concentrations in well G15S increased above the AGQS during the third quarter 2007 sampling event and remained above the AGQS until replaced by well G51S. Total arsenic concentrations in well G51S have remained above the AGQS throughout the current review period with highest concentrations generally recorded during first and third quarter sampling events. As shown by the trend graph provided in Appendix D, no increasing trend is apparent indicating the concentrations are the result of temporal variability.

G18S—Total arsenic concentrations in well G18S consistently exceeded the AGQS throughout the current as well as previous review periods and displayed an increasing trend from 1997 to 2005, reaching a maximum concentration of 150 ug/L (second quarter 2005). Since second quarter 2005 the concentrations have decreased and have been within historic limits for this parameter. No increasing trend is apparent for total arsenic in well G18S (abandoned July 2011).

G41S—Concentrations in well G41S have been above the AGQS throughout its sampling history and only most recently (second quarter through fourth quarter 2011) decreased below the AGQS. As shown by the trend graph, no increasing or decreasing trend is apparent for the current or previous review periods.

G50S—Well G50S has been dry since second quarter 2010. Prior to going dry, concentrations did exceed the standard. Since well G50S has only contained sufficient water to sample during five sampling events, a determination of trend cannot be concluded.

G52S—Total arsenic concentrations in well G52S have been above the AGQS throughout its sampling history (fourth quarter 2009 through first quarter 2012) with the exception of fourth quarter 2009 and fourth quarter 2011. The concentration reached a maximum (74 ug/L) during second quarter 2010 and has been decreasing since that time.

G54S—The first sampling for well G54S was conducted first quarter 2012 with a recorded concentration of 18 ug/L. No additional information exists currently for this well.

R03S—Total arsenic concentrations in well R03S have historically been above the AGQS during previous review periods. However, during the current review period concentrations have decreased and been non-detect or stable below the AGQS with sporadic detections above the AGQS.

R42S—Concentrations in well R42S have been above the AGQS since sampling commenced second quarter 1997. During the current review period the concentration increased to 70 ug/L during first quarter 2007, the highest concentration since second quarter 1999. However, since first quarter 2007 the concentration of total arsenic in well R42S has been decreasing.

Prior to and during the current review period, concentrations of total arsenic in several Upper Zone wells exceeded the AGQS. However, during the current review period, all wells with total arsenic concentrations above the AGQS display decreasing or stable trends. Concentrations in wells G41S and R03S, which have historically exceeded the AGQS, have decreased below the AGQS during the current review period. Wells not discussed are those with total arsenic concentrations stable or decreasing below the AGQS.

Boron, dissolved

As discussed previously, dissolved boron was one of the parameters used to delineate the GMZ extent as part of the 2004 application (Illinois EPA Application Log No. 2004-257). Concentrations of dissolved boron from several Upper Zone wells (G15S/G51S, G18S, G34S, G37S, G40S, G41S, G50S, and R42S) have exceeded the AGQS (98 ug/L) during the current review period. The remaining wells screened in the Upper Zone exhibit stable concentrations below the AGQS; boron concentrations in these wells are not discussed below.

G15S—Dissolved boron concentrations in well G15S have consistently exceeded the AGQS throughout its sampling history. Although variability increased during the previous review period no significant increasing or decreasing trend was apparent. Upon completion of sampling at G15S (second quarter 2008) the concentration of dissolved boron was 1,300 ug/L. Well G51S replaced G15S and was initially sampled the second quarter 2009. Concentrations were detected below the AGQS until second quarter 2010. Since second quarter 2010 dissolved boron concentrations in well G51S have been increasing to the current concentration of 520 ug/L (third quarter 2011).

G18S—Concentrations in well G18S have been slightly below the AGQS except during fourth quarter sampling events when concentrations increased. The temporary increases above the AGQS during fourth quarter sampling events appear to be the result of seasonal fluctuation and temporal variability. No increasing trends are apparent for dissolved boron in well G18S (abandoned July 2011).

G34S—Dissolved boron concentrations in well G34S have fluctuated slightly above and below the AGQS since inclusion of the well into the monitoring program during the second quarter 1999. During the current review period, dissolved boron concentrations have decreased below the AGQS and have remained since second quarter 2008.

G37S—Dissolved boron concentrations in well G37S have been similar to concentrations in well G34S, fluctuating slightly above and below the AGQS with no apparent increasing trend. Dissolved boron concentrations in well G37S have been below the AGQS since second quarter 2007.

G40S—Concentrations in well G40S have historically remained stable above the AGQS but decreased below the AGQS during the current review period from second to fourth quarter 2007. After reaching a minimum concentration (80 ug/L) during fourth quarter 2007, concentrations increased, reaching a maximum (340 ug/L) during third quarter 2009. Although sufficient volume of groundwater has not been available for sampling purposes since second quarter 2010, there were no significant increasing trends apparent for dissolved boron in well G40S.

G41S—Dissolved boron concentrations in well G41S have consistently remained above the AGQS during previous review periods. However, since first quarter 2003, concentrations have been decreasing significantly and were no longer exceeding the AGQS beginning first quarter 2008. The concentrations have continued to decrease below the AGQS with the exception of fourth quarter 2008 and third quarter 2009.

G50S—Dissolved boron concentrations in well G50S, which has been dry since second quarter 2010, were below the AGQS from second quarter 2009 to first quarter 2010. The only concentration to exceed the AGQS was recorded during first quarter 2009. Since well G50S has only had sufficient water to sample during five sampling events, a determination of trend cannot be concluded.

R42S—Dissolved boron concentrations in well R42S have fluctuated below the AGQS since second quarter 2002 with the exception of fourth quarter 2011 (99 ug/L). Dissolved boron concentrations appear stable near the AGQS.

Prior to and during the current review period, concentrations of dissolved boron in several Upper Zone wells exceeded the AGQS. However, with the exception of G51S, all wells with dissolved boron concentrations above the AGQS display decreasing or stable trends throughout the current review period. Dissolved boron concentrations in well G41S, which have historically exceeded the AGQS, have decreased below the AGQS during the current review period.

Boron, total

Concentrations and trends for total boron are similar to those recorded for dissolved boron.

G15S—Total boron concentrations in well G15S have consistently exceeded the AGQS (200 ug/L) throughout its sampling history. Although variability increased during the previous review period, no significant increasing or decreasing trend was apparent. The last sampling event for G15S occurred the second quarter 2008, resulting in a concentration of 1,400 ug/L. The well was abandoned and replaced by G51S. Initial total boron concentrations obtained from G51S were below the AGQS until third quarter 2010. Since third quarter 2010 total boron concentrations in well G51S have been increasing to the current concentration of 500 ug/L (third quarter 2011).

G18S—Concentrations in well G18S have fluctuated above and below the AGQS with maximum concentrations generally recorded during fourth quarter sampling events. Similar to the trend for dissolved boron, the increases above the background and maximum concentrations recorded during fourth quarter sampling events appear to be the result of seasonal fluctuation and temporal variability. No increasing trends are apparent for total boron in well G18S (abandoned July 2011).

G34S—Total boron concentrations in well G34S, with the exception of first quarter 2008, have remained stable and below the AGQS throughout previous review periods as well as the current review period.

G40S—Concentrations in well G40S have fluctuated above and below the AGQS during previous review periods as well as the current review period. During the current review period, concentrations have been recorded above the AGQS during first quarter 2007, third quarter 2009, and second quarter 2010. Although the well has been dry since second quarter 2010, there were no increasing trends apparent for total boron in well G40S.

G41S—Total boron concentrations in well G41S, similar to dissolved boron concentrations, have consistently remained above the AGQS during previous review periods. However, since first quarter 2003 concentrations have been decreasing significantly, dropping below the AGQS during first quarter 2008. The concentrations have continued to decrease below the AGQS throughout the current review period.

G50S—Total boron concentrations in well G50S, which has been dry since second quarter 2010, were below the AGQS from second quarter 2009 to fourth quarter 2009. The only concentrations to exceed the AGQS were recorded during first quarter 2009 and first quarter 2010.

G52S—Total boron concentrations in well G52S, sampled since fourth quarter 2009, were initially below the AGQS and increased above the AGQS to a maximum concentration (290 ug/L) during first quarter 2011. Since first quarter 2011 concentrations have decreased below the AGQS.

Prior to and during the current review period, concentrations of total boron in several Upper Zone wells exceeded the AGQS. However, with the exception of G51S, all wells with total boron concentrations above the AGQS display decreasing or stable trends throughout the current review period. Similar to dissolved boron concentrations, total boron concentrations in well G41S, which have historically exceeded the AGQS, have decreased below the AGQS during the current review period. Concentrations and trends for total boron are similar to those recorded for dissolved boron. Wells not discussed are those with total boron concentrations stable or decreasing below the AGQS.

<u>Chloride, dissolved</u>

As discussed previously, dissolved chloride was the original indicator parameter used by Geotrans for delineating the GMZ in 1995. In later applications (1998 and 1999) Geotrans indicated that dissolved chloride may not be an effective indicator of leachate-derived compounds due to the possibility of other potential sources within the vicinity of the facility. The use of dissolved chloride as an indicator parameter to demarcate the GMZ was superseded by dissolved ammonia and dissolved boron. Concentrations of dissolved chloride from several Upper Zone wells (G15S/G51S, G18S, G34S, G37S, G40S, G41S, G50S, R03S, and R42S) have exceeded the AGQS (87.5 mg/L) during the current review period. Wells exhibiting exceedences during the review period are discussed below.

G15S—Dissolved chloride concentrations in well G15S have consistently exceeded the AGQS during previous review periods as well as the current review period (until sampling ceased after second quarter 2008). Well G15S was abandoned and replaced with G51S, which initiated sampling the first quarter 2009. Chloride concentrations in the replacement well have been similar to those recorded for G15S. Most recently (third quarter 2011), the concentration of dissolved chloride decreased to 4.4 mg/L.

Due to construction activities in the NEU, G51S was been dry the fourth quarter 2011 and the first quarter 2012. Although dissolved chloride concentrations in well G51S have fluctuated significantly since approximately 2003, no significant increasing trends are noted for this parameter.

G18S—Concentrations in well G18S have been below the AGQS since first quarter 2002. During the final sampling event for well G18S (abandoned in July 2011), the concentration had increased to 110 mg/L, significantly lower than concentrations recorded prior to 2002.

G34S—Dissolved chloride concentrations in well G34S have historically fluctuated above and below the AGQS. However, during the current review period concentrations have decreased and remained stable below the AGQS since second quarter 2008.

G37S—Similar to well G34S, dissolved chloride concentrations in well G37S have fluctuated above and below the AGQS throughout its sampling history. However, since first quarter 2007, concentrations have continued to decrease below the AGQS.

G40S—Dissolved chloride concentrations in well G40S increased gradually during the previous review period before decreasing below the AGQS during the second quarter 2007 sampling event. Concentrations remained below the AGQS until first quarter 2008 at which time concentrations began to fluctuate above the AGQS, increasing to a high of 290 mg/L (first quarter 2009). Concentrations consistently decreased to 190 mg/L from the first quarter 2009 to through second quarter 2010. Due to construction activities in the NEU, G40S has been dry since third quarter 2010.

G41S—Dissolved chloride concentrations in well G41S have been gradually decreasing since 1999. During the current review period, the concentrations have continued to decrease below the AGQS.

G50S—Concentrations in well G50S, sampled from first quarter 2009 to first quarter 2010, after which time the well went dry, were below the AGQS with the exception of the initial sampling event (first quarter 2009). The available data suggests the concentrations are stable well below the AGQS.

R03S—Dissolved chloride concentrations in well R03S have remained below the AGQS during the current review period with the exception of second quarter 2007 (90 mg/L). Concentrations continue to decrease since 2002.

R42S—Dissolved chloride concentrations in well R42S have historically fluctuated above and below the AGQS, and are currently below the AGQS with a concentration of 67 mg/L. The trend has continued through the current review period with no apparent increasing or decreasing characteristics.

Prior to and during the current review period, concentrations of dissolved chloride in several Upper Zone wells exceeded the AGQS. However, with the exception of G40S which has been dry since the third quarter 2010, dissolved chloride concentrations above the AGQS display decreasing trends (i.e., G34S, G37S, G41S, and R03S) or stable trends (i.e., G15S/G51S, G18S, and R42S) throughout the current review period.

Chloride, total

Concentrations and trends for total chloride are consistent with those exhibited for the dissolved component. Ten wells (G15S/G51S, G18S, G34S, G37S, G40S, G41S, G50S, R03S, and R42S) have had total chloride concentrations above the AGQS (87.5 mg/L) during the current review period. A detailed discussion of the trends can be found in the dissolved chloride section above along with the trend graph contained in Appendix D. Overall, most concentrations have decreased since completion of the final cover in 2001 and with the exception of increasing trends observed for G40S and G15S/G51S, the wells currently exceeding the AGQS exhibit stable to decreasing trends.

Nitrate as N, dissolved

Concentrations in wells screened in the Upper Zone are generally stable and below the AGQS of 11.74 mg/L. Only wells exhibiting concentrations above the AGQS are discussed below.

G119/G50S—Well G119, replaced by G50S in December 2008, was last sampled the first quarter 2007, resulting in a concentration of 13 mg/L, which exceeded the AGQS. However, results from the replacement well (G50S) have been below the AGQS during each subsequent sampling event.

G130—Concentrations in well G130 have been stable and slightly above the AQGS value at approximately 12 mg/L during the previous and current review periods.

G40S—Dissolved nitrate concentrations in well G40S have been below the AGQS except for sporadic increases above the AGQS during second quarter 2007 and second quarter 2008.

Nitrate as N, total

Concentrations and trends for total nitrate are consistent with those exhibited for the dissolved component of nitrate. Four wells (G119, G130, G33S, and G40S) have exhibited total nitrate concentrations above the AGQS (11.74 mg/L) during the current review period. A discussion of the trends can be found in the dissolved nitrate section above along with the trend graph contained in Appendix D. Overall, most concentrations have stabilized since completion of the final cover in 2001 and the variability that is observed appear to be the result of seasonal fluctuations due to the implementation of the quarterly sampling scheduling which began in 2005.

Potassium, total

Total potassium was sampled annually until the issuance of Permit Modification No. 28 (approval of the 2004 GMZ evaluation) during fourth quarter 2005, at which point a quarterly sampling schedule was implemented. Only wells exhibiting exceedences of the AGQS are discussed below. Wells reporting concentrations consistently below the AGQSs are not discussed.

G15S—Concentrations in well G15S have consistently exceeded the AGQS (29.01 mg/L) during previous review periods as well as the current review period. Significant fluctuations in concentration began in 2003 and continued until sampling was discontinued after the second quarter 2008 sampling event due to well abandonment. Well G51S, which replaced G15S, has been sampled since first quarter 2009.

Concentrations have been steadily increasing above the AGQS to a concentration of 46 mg/L (third quarter 2011 – G51S was dry the four quarter 2011 and first quarter 2012).

G18S—Concentrations in well G18S have been decreasing since second quarter 2005 and have sporadically increased above the AGQS during first and fourth quarters 2008 and first and fourth quarters 2009. However, the temporary concentration increases were within historic limits for the parameter.

G40S—Concentrations above the AGQS were recorded in well G40S during first quarter 2007 and second quarter 2008 (30 and 38 mg/L, respectively). After reaching a maximum concentration during second quarter 2008, the concentration has been steadily decreasing. Well G40S has been dry since the third quarter 2010, but total potassium concentrations have been stable during previous review periods as well as the current review period, and typically below the AGQS.

G41S—Total potassium concentrations in well G41S were recorded above the AGQS during first and second quarters 2007. However, concentrations have been decreasing steadily since fourth quarter 2005 and have been below the AGQS since third quarter 2007.

G50S—Concentrations in well G50S have fluctuated significantly above and below the AGQS from first quarter 2009 to first quarter 2010, after which time the well has been dry. Based on the limited data available for well G50S, no significant increasing or decreasing trends are apparent.

G52S—Concentrations in well G52S, initially sampled first quarter 2009, increased above the AGQS to 55 mg/L (first quarter 2011) but has since decreased to 24 mg/L (first quarter 2012). The limited dataset for G52S cannot be used to conclude any long-term trends.

Prior to and during the current review period, concentrations of total potassium in a few of the Upper Zone wells exceeded the AGQS. However, with the exception of G51S, concentrations have been decreasing or stable throughout the current review period.

<u>Sodium, total</u>

Concentrations of total sodium above the AGQS (164.79 mg/L) were recorded in two wells (G15S and G51S) during the current review period. Concentrations in well G51S, which replaced well G15S, have been steadily increasing since it was initially sampled first quarter 2009. Well G15S and its replacement G51S are the only wells with total sodium concentrations exceeding the AGQS during the current review period.

<u>Organic Parameters (Upper Zone)</u>

<u>1,4-Dichlorobenzene</u>

Historically, concentrations in well G15S have exceeded the AGQS (5 ug/L) but have shown a steady decrease from 13 ug/L in 1997 to 9 ug/L in 2008. Although concentrations in well G51S, which replaced well G15S, have increased above the AGQS during fourth quarter 2010 and second quarter 2011, the concentrations are lower than recorded in well G15S. G15S/G51S are the only wells that exhibited 1,4-dichlorobenzene exceedences of the AGQS during the current review period.

Tetrahydrofuran

Concentrations of tetrahydrofuran have exceeded the AGQS (42 ug/L) in well G51S during the current review period. As shown by the trend graph provided in Appendix D, concentrations have increased steadily since the initial sampling event (second quarter 2009). Well G51S has been dry since the fourth quarter 2011; no additional data are available from well G51S.

5.2.1.1.2 Non-GMZ Parameters

During the current review period, some parameters not currently included in the GMZ list of parameters have exhibited concentrations exceeding the respective AGQS (Table 3). Trend graphs detailing the concentrations of the subject parameters in all Upper Zone wells are contained in Appendix D.

Inorganic Parameters (Upper Zone)

Chemical Oxygen Demand (COD)

Chemical oxygen demand (COD) is a measure of the amount of oxygen needed to fully oxidize an organic compound by the addition of a strong oxidizing agent under acidic conditions. The COD analysis is commonly used as an indirect measurement of the amount of organic compounds in water; it is not a specific chemical constituent and cannot differentiate between the type of organic present in a sample.

COD measurements exceeded the AGQS (50.04 mg/L) in well G15S during second quarter 2008. Although COD measurements have historically exceeded the AGQS in well G15S, measurements were below the AGQS during second quarter 2007, the only other measurement obtained during the current review period. Furthermore, concentrations appear stable and the replacement well for G15S (G51S) has not exceeded the AGQS.

Cobalt, total

Concentrations of total cobalt in well G18S exceeded the AGQS (50 ug/L) during second quarter 2008. No increasing trend is noted for this parameter.

Iron, dissolved

Dissolved iron was removed from the routine monitoring list (List G1) as part of the regulatory amendments imposed by Illinois Pollution Control Board Rulemaking Docket No. R2007-008. Concentrations of dissolved iron in well R42S have historically been above the AGQS (12,189.61 ug/L), although no increasing trends are present. Dissolved iron exceedences or significant increasing trends have not been recorded at other Upper Zone monitoring points. The elevated concentrations at R42S may be the result of natural spatial variability between the screen interval for well R42S and the other Upper Zone wells. Well R42S is substantially shallower than the other Upper Zone wells and encounters a black organic silty clay lens, as opposed to the sand and gravel screened by the other shallow Northern Unit monitoring wells.

Lead, dissolved

Concentrations of dissolved lead have exceeded the AGQS (4 ug/L) in two Upper Zone wells (G51S and G52S) during the current review period. Concentrations in well G51S have been non-detect except during third quarter 2010 with a recorded concentration of 27 ug/L. Concentrations in well G52S exceeded the AGQS during second quarter 2010, and third and fourth quarters 2011. Dissolved lead was not detected during first quarter 2012.

Magnesium, dissolved

Concentrations of dissolved magnesium have exceeded the AGQS (170.41 mg/L) in Upper Zone wells G51S and G52S during the current review period. Dissolved magnesium exceeded the AGQS in G51S during third quarter 2010 but returned to representative concentrations the following quarter. Concentrations in well G52S exceeded the AGQS during second quarter 2010 and again during fourth quarter 2011. Concentrations decreased the following quarters and no increasing trends are apparent for either well.

Magnesium, total

Concentrations of total magnesium exceeded the AGQS (109.5 mg/L) in Upper Zone wells G18S and G40S during second quarter 2008. No other exceedences during the current review period have been noted and no increasing trends are apparent.

Manganese, dissolved

Dissolved manganese was removed from the routine monitoring list (List G1) as part of the regulatory amendments imposed by Illinois Pollution Control Board Rulemaking Docket No. R2007-008. Concentrations in well R42S exceeded the AGQS (1,479.53 ug/L) during third quarter 2007. However, upon sampling the following quarter the concentration had decreased below the AGQS.

pH (field)

Field measurements of pH have increased above the AGQS range (5.4 – 8.1) in several Upper Zone wells (G130, G18S, G33S, G34S, G35S, G37S, G40S, and G52S) during the current review period. The vast majority of exceedences occurred during the fourth quarter 2011 sampling event and were not confirmed during follow up sampling. No increasing or decreasing trends are apparent.

Selenium, total

Concentrations of total selenium exceeded the AGQS (4 ug/L) in three Upper Zone wells (G15S, G18S, and G40S) during the current review period. Concentrations have frequently exceeded the AGQS in well G15S during previous review periods as well as the current review period. However, concentrations are stable and within historic limits for this parameter. Total selenium concentrations exceeded the AGQS in wells G18S and G40S during second quarter 2008. However, no other exceedences were recorded for this parameter in the subject wells and concentrations were stable with no increasing trends noted.

Specific Conductance

Field measurements of specific conductance exceeded the AGQS (3,820 umhos/cm) in well G15S during fourth quarter 2007 and first quarter 2008 (confirmed by resample). However, upon sampling the following quarter measurements had decreased below the AGQS and no increasing trends are noted. Furthermore, concentrations in the replacement for G15S (G51S) have not exceeded the AGQS.

Sulfate, dissolved

Concentrations of dissolved sulfate exceeded the AGQS (360 mg/L) in well R42S during second quarter 2007. Upon sampling the following quarter the concentration decreased below the AGQS and has been stable to decreasing since that time.

Sulfate, total

The total sulfate concentrations in well R42S have exceeded the AGQS (179.37 mg/L) during each sampling event (three total) in which total sulfate was analyzed during the review period. However, the concentration above the AGQS was stable with no increasing trend noted.

Organic Parameters (Upper Zone)

Acetone

Concentrations of acetone, a common laboratory artifact, have exceeded the AGQS (10 ug/L) in wells G15S and G51S during the current review period. However, concentrations decreased to non-detect upon sampling the following quarter and have remained stable.

Acrylonitrile

The concentration of acrylonitrile exceeded the AGQS (10 ug/L) in well R03S during second quarter 2007. However, the concentration decreased to non-detect upon sampling the following quarter and has remained non-detect since second quarter 2007.

Carbon Disulfide

The concentration of carbon disulfide exceeded the AGQS (5 ug/L) in well G17S during fourth quarter 2008. Upon sampling the following quarter the concentration decreased to non-detect.

5.2.2 Lower Zone

The Lower Zone of the GMZ generally ranges from 681 feet above MSL to the bedrock surface and is currently monitored by wells G03M, G16M, G33D, G34D, G35D, G36S, G37D, G38S, G41M, G52M, and G54M. The dataset analyzed ranges from first or second quarter 1997 (depending on the parameter) through first quarter 2012 with the exception of G18D (abandoned July 2009) and G39S (replaced by R39S in January 2009). The wells are typically screened in saturated sand and gravel deposits.

The trend analyses as described below are based on evaluation of individual parameters. Graphs depicting parameter specific concentrations are contained in Appendix E.

5.2.2.1 Parameter Specific Trends

5.2.2.1.1 GMZ Parameters

Inorganic Parameters (Lower Zone)

Ammonia as N, dissolved

The presence of dissolved ammonia in the groundwater has been associated with activities from the Northern Unit and was designated an indicator parameter in previous investigations (HSI Geotrans 1998 and 1999). As shown in the exceedence summary table for the current review period (Table 3), historic analytical data (Table 4), and trend graph (Appendix E), concentrations in several Lower Zone wells exceeded the AGQS (0.9 mg/L) before and during the review period. Wells discussed below include only those that exhibited exceedences of AGQSs during the current review period.

G16M—Dissolved ammonia concentrations in well G16M have consistently exceeded the AGQS during previous review periods and have continued to exceed the AGQS in the current review period until second quarter 2008. However, since second quarter 2008, concentrations have decreased below the AGQS and have been non-detect since third quarter 2008.

G18D—Concentrations in well G18D have historically been non-detect, a trend which continued into the current review period until second quarter 2008 at which time concentrations increased above the AGQS. Dissolved ammonia concentrations in well G18D increased to a maximum of 14 mg/L (third quarter 2009) before steadily decreasing to 1 mg/L (first and second quarters 2011). Well G18D was abandoned in July 2011 due to development of the NEU.

G34D—Concentrations in well G34D have sporadically exceeded the AGQS during previous review periods but have remained above the AGQS since first quarter 2009. Concentrations have steadily decreased since the fourth quarter of 2009 to a current value of 1.5 mg/L (first quarter 2012).

G35D—Dissolved ammonia concentrations in well G35D have frequently increased above the AGQS throughout its sampling history. During the current review period concentrations have fluctuated above and below the AGQS but have been below the AGQS consistently since third quarter 2010 and have been non-detect since first quarter 2011.

G37D—Concentrations in well G37D were above the AGQS from first quarter 1999 through first quarter 2002 at which time concentrations decreased below the AGQS. Concentrations remained below the AGQS until first quarter 2008 when they increased to a maximum concentration of 2.1 mg/L. Concentrations have since decreased to the most recent concentration of 0.49 mg/L (second quarter 2011).

G38S—Dissolved ammonia concentrations in well G38S have historically and consistently exceeded the AGQS. However, concentrations have been steadily decreasing since fourth quarter 2007 and except for second quarter 2011 (0.93 mg/L) have been below the AGQS since fourth quarter 2010.

G39S—Concentrations in well G39S consistently exceeded the AGQS from third quarter 1999 to second quarter 2007. However, since 2001 concentrations have been decreasing and have been below the AGQS since the third quarter 2007. Well G39S was replaced by well R39S in January 2009 and the initial sampling was conducted second quarter 2009. Initially non-detect, concentrations increased to 42 mg/L (second quarter 2010) before decreasing to the current concentration of 12 mg/L (third quarter 2011).

G41M—Concentrations in well G41M have historically exceeded the AGQS, but during the current review period concentrations decreased below the AGQS (second quarter 2008 to second quarter 2010). Upon sampling third quarter 2010, concentrations increased to 2.3 mg/L and again during fourth quarter 2010 to 3.6 mg/L before decreasing below the AGQS during fourth quarter 2011. The decreasing trend has continued with the most recent concentration recorded at 0.18 mg/L (first quarter 2012).

G52M—With the exception of third and fourth quarters 2011 sampling events, dissolved ammonia concentrations in well G52M have been below the AGQS since inclusion into the monitoring program the fourth quarter 2009. Although a slight increasing trend is noted for this parameter, the dataset is of limited temporal extent and a definitive conclusion regarding trend cannot be made at this time. Additionally, the most recent (first quarter 2012) concentration is below the AGQS.

Prior to and during the current review period, concentrations of dissolved ammonia in several Lower Zone wells exceeded the AGQS. However, as shown by the trend graph provided in Appendix E, concentrations have decreased significantly during previous review periods and continued to decrease or have been stable throughout the current review period. No increasing trends are noted for any wells which have been reported exceeding the AGQS.

Arsenic, dissolved

Concentrations in all Lower Zone wells typically exceeded the AGQS (2 ug/L) prior to 2001, at which time concentrations in all but three wells decreased below the AGQS. During the current review period, dissolved arsenic concentrations have exceeded the AGQS (2 ug/L) in four Lower Zone wells (G38S, G39S/R39S, and G41M). Only these wells are discussed below.

G38S—Concentrations in well G38S were above the AGQS for the majority of sampling events until decreasing below the AGQS during first quarter 2010. Since first quarter 2010 the concentration of dissolved arsenic in well G38S has remained below the AGQS and has been consistently non-detect since first quarter 2011.

G39S/R39S—Dissolved arsenic concentrations in well G39S have historically and consistently been below the AGQS until third quarter 2008 (3.6 ug/L). Concentrations remained above the AGQS until sampling at well G39S ceased first quarter 2009. Concentrations in the replacement for well G39S (R39S) remained relatively stable above the AGQS until second quarter 2010 at which time concentrations decreased and have remained below the AGQS. Dissolved arsenic was not detected in well R39S during the most recent sampling event (third quarter 2011). Well R39S was dry the fourth quarter 2011 and first quarter 2012.

G41M—With the exception of second quarter 2007, concentrations in well G41M have been below the AGQS throughout the current review period. Dissolved arsenic has not been detected in well G41M since fourth quarter 2010.

Prior to the current review period, dissolved arsenic concentrations in several Lower Zone wells exceeded the AGQS. During the current review period concentrations of dissolved arsenic have exceeded the AGQS in only four of the Lower Zone wells. As shown by the trend graph provided in Appendix E, concentrations have decreased significantly during previous review periods and continued to decrease or have been stable throughout the current review period. No increasing trends are noted for any wells which have been reported exceeding the AGQS. As discussed in Section 5.2.1.1.1, arsenic is naturally occurring in groundwater and is highly sensitive to oxygen reducing conditions. The groundwater at the facility is unconfined and shallow. Movement beneath a structure (i.e., waste unit) is sufficient to cause anaerobic conditions, which can cause the arsenic concentrations to increase without any direct influence from the waste unit. Arsenic concentrations detected in downgradient wells do not necessarily indicate an impact from the waste unit.

<u>Arsenic, total</u>

Concentrations of total arsenic in several Lower Zone wells have exceeded the AGQS (10 ug/L) during the current review period. As illustrated in the trend graph contained in Appendix E, concentrations in several wells fluctuated significantly beginning the first quarter 2006. However, the increases above the AGQS have been short-term increases that subsequently decreased below the AGQS within one or two sampling events. Only wells that exhibited exceedences during the current review period (2007 to 2012) are discussed below.

G03M—Concentrations in well G03M have exceeded the AGQS only once since second quarter 1997. The exceedence of the AGQS was recorded during the first quarter 2012 sampling event (14 ug/L). No increasing trend is noted for this parameter in well G03M.

G18D—Total arsenic concentrations in well G18D have historically been below the AGQS but have increased above the AGQS (third quarter 2007 and first quarter 2011) as a result of the increased fluctuation beginning in 2006. For each of the two exceedences, concentrations have decreased below the AGQS the following quarter and there are no increasing trends noted for this parameter. Well G18D was abandoned due to development of the NEU.

G33D—Concentrations in well G33D have increased above the AGQS during previous review periods but have subsequently decreased the following quarter. Similar to previous review periods, the concentrations of total arsenic in well G33D have increased above the AGQS during first and second quarters 2011 (19 and 11 ug/L, respectively), decreased below the AGQS the third and fourth quarters of 2011, and increased again during the first quarter 2012 (21 ug/L). The concentrations significantly fluctuated in 2011, but no specific trend is apparent.

G34D—Concentrations in well G34D have historically and consistently been below the AGQS. However, during first quarter 2009 the concentration increased to 15 ug/L, exceeding the AGQS. The concentration decreased below the AGQS the following quarter where it has remained since.

G35D—Total arsenic concentrations in well G35D have significantly fluctuated above and below the AGQS during the current review period. Due to the range of fluctuation, no trend is apparent.

G38S—Concentrations in well G38S have fluctuated similar to other Lower Zone wells, which have exceeded the AGQS. The range of fluctuation became more pronounced later in the review period. Total arsenic concentrations exceeded the AGQS during first and fourth quarter 2011 sampling events (12 ug/L and 16 ug/L, respectively). However, as with several other Lower Zone wells, concentrations following a sharp increase subsequently decreased below the AGQS.

G39S - Total arsenic concentrations in well G39S exceeded the AGQS from third quarter 2008 to first quarter 2009, at which time well G39S was replaced by well R39S. The increasing trend continued in well R39S until second quarter 2010 (130 ug/L) at which time concentrations decreased. Total arsenic concentrations in well R39S have been below the AGQS since fourth quarter 2010 and no increasing trend is noted for this parameter.

G41M—Concentrations in well G41M have historically been recorded above the AGQS. An increasing trend noted during the previous review period ended with a maximum concentration of 170 ug/L during fourth quarter 2006 before decreasing and becoming stable, fluctuating above and below the AGQS. During the current review period total arsenic concentrations in well G41M have fluctuated but generally remained below the AGQS. Similar to other Lower Zone wells, no increasing trend is apparent for this parameter and the short-term exceedences of the AGQS are the result of fluctuation beginning in 2006.

As indicated by the trend graph contained in Appendix E, only concentrations from well G41M have consistently exceeded the subject AGQS during previous review periods. An increase in fluctuation beginning in 2006 in all Lower Zone wells has caused concentrations to periodically exceed the AGQS but exceedences have been short-lived, decreasing below the AGQS after one or two quarters with no increasing trends noted.

<u>Boron, dissolved</u>

As discussed previously, dissolved boron was designated as an indicator parameter in previous investigations (HSI Geotrans, 1999 & 1998) and one of the parameters used to delineate the GMZ extent as part of the 2004 application (Illinois EPA Application Log No. 2004-257). Dissolved boron concentrations in seven Lower Zone wells (G18D, G34D, G35D, G38S, G39S/R39S, and G41M) have exceeded the AGQS (98 ug/L) during the current review period. However, as indicated by the trend graph provided in Appendix E, decreasing or stable trends can be observed in nearly all GMZ wells.

G18D—Concentrations in well G18D have historically been below the AGQS but increased from 75 ug/L during first quarter 2008 to 160 ug/L second quarter 2008. Concentrations decreased steadily since second quarter 2008 and were below the AGQS by second quarter 2009. The decreasing trend continued until well G18D was abandoned July 2011 due to development of the NEU.

G34D—Dissolved boron concentrations in well G34D have been similar to concentrations in well G18D, increasing from 79 ug/L during fourth quarter 2007 to 140 ug/L during first quarter 2008. Concentrations decreased steadily since third quarter 2008 and were below the AGQS by second quarter 2009. Concentrations have continued to decrease below the AGQS in well G34D.

G35D—Concentrations in well G35D have exceeded the AGQS during previous review periods but have been decreasing steadily throughout the current review period. During fourth quarter 2007 the concentration was recorded as 410 ug/L, but was below the AGQS the following quarter.

G38S—Dissolved boron concentrations in well G38S have been stable to decreasing since 2000. Although concentrations have generally remained above the AGQS during previous review periods, concentrations decreased below the AGQS from fourth quarter 2010 to second quarter 2011. Upon sampling third quarter 2011 the concentration of dissolved boron had increased above the AGQS to 110 ug/L and increased again during fourth quarter 2011. The elevated concentration of dissolved boron in well G38S is within historic limits for the parameter and a concentration increase during one sampling event is insufficient to conclude a trend.

G39S—Dissolved boron concentrations in well G39S have been stable above the AGQS since 1998 but began increasing through third and fourth quarters of 2008 before decreasing. Well G39S was replaced by well R39S in January 2009 and concentrations were similar to those recorded in well G39S. Dissolved boron concentrations have steadily decreased in well R39S since third quarter 2009 and decreased below the AGQS upon sampling first quarter 2011. Concentrations have remained below the AGQS since.

G41M—Dissolved boron concentrations in well G41M have shown a steadily decreasing but fluctuating trend from 1,100 ug/L in 1998 to current concentrations below the AGQS. Concentrations have remained below the AGQS since first quarter 2008.

Prior to the current review period dissolved boron concentrations in several Lower Zone wells exceeded the AGQS. However, steadily decreasing trends can be observed in nearly all GMZ wells as indicated by the trend graph provided in Appendix E. With the exception of G38S, which has increased above the AGQS during the third and fourth quarter 2011 sampling events, no increasing trends are noted for any wells which have been reported exceeding the AGQS during the current review period.

<u>Boron, total</u>

Concentrations in six Lower Zone wells (G18D, G35D, G38S, G39S/R39S, and G41M) have exceeded the AGQS for total boron (200 ug/L) during the current review period.

G18D—Concentrations in well G18D have historically been below the AGQS, a trend that has continued throughout the current review period with the exception of an exceedence noted during third quarter 2007 (230 ug/L). Upon sampling the following quarter the concentration decreased below the AGQS to 37 ug/L. Since the concentration spike during third quarter 2007, concentrations of total boron in well G18D have remained stable below the AGQS until abandonment in July 2011.

G35D—Similar to well G18D, total boron concentrations in well G35D have historically been below the AGQS, a trend that has continued throughout the current review period with the exception of an exceedence noted during second quarter 2007 (430 ug/L). Upon sampling the following quarter the concentration decreased to 34 ug/L and has remained stable.

G38S—Total boron concentrations in well G38S have commonly exceeded the AGQS during previous review periods, remaining stable until second quarter 2004 at which time concentrations began increasing. Concentrations began decreasing second quarter 2005 with some fluctuation above and below the AGQS. However, since first quarter 2008, concentrations have significantly decreased and have consistently been below the AGQS since second quarter 2008.

G39S—Total boron concentrations in well G39S have historically been below the AGQS. However, concentrations increased above the AGQS during third quarter 2008 and increased until sampling was discontinued (first quarter 2009). Well G39S was replaced by well R39S in January 2009 and concentrations were similar to those recorded in well G39S. Although concentrations continued to increase until second quarter 2010, total boron concentrations (similar to dissolved boron concentrations) subsequently decreased and have been below the AGQS since fourth quarter 2010.

G41M—Total boron concentrations in well G41M, similar to dissolved boron concentrations, have shown a steadily decreasing but fluctuating trend since 1998. Although total boron concentrations have periodically exceeded the AGQS during the current review period, concentrations have remained stable below the AGQS since first quarter 2008.

Prior to the current review period total boron concentrations in several Lower Zone wells exceeded the AGQS. However, steadily decreasing trends can be observed in nearly all GMZ wells as indicated by the trend graph provided in Appendix E. With the exception of G39S/R39S, which has recently increased above the AGQS but subsequently displayed a decreasing trend, no increasing trends are noted for any wells which have been reported exceeding the AGQS during the current review period. Wells not discussed are those with total boron concentrations stable or decreasing below the AGQS.

<u>Chloride, dissolved</u>

Dissolved chloride was the original indicator parameter presented by Geotrans for delineating the GMZ in 1995. In later applications (Geotrans 1998 and 1999), it was concluded that chloride may not be as effective an indicator of leachate-derived compounds due to the possibility of other potential sources within the vicinity of the facility and was superseded with dissolved ammonia and dissolved boron. Concentrations in seven Lower Zone wells (G18D, G34D, G35D, G38S, G39S/R39S, and G41M) have exceeded the AGQS for dissolved chloride (87.51 mg/L) during the current review period.

G18D—Concentrations in well G18D have periodically fluctuated above the AGQS during previous review periods as well as the current review period. However, since the first quarter 2008, concentrations have been decreasing and have been below the AGQS since third quarter 2008.

G34D—Dissolved chloride concentrations in well G34D were stable below the AGQS until the first quarter 2004 sampling event. Concentrations increased through the fourth quarter 2007 (170 mg/L) at which time a significant and steady decreasing trend began. Concentrations have continued to decrease and have been below the AGQS since third quarter 2008.

G35D—Dissolved chloride concentrations in well G35D have historically been stable with periodic fluctuations (single event exceedences) above the AGQS. With the exception of a sporadic spike, concentrations have been below the AGQS since 2004. During the current review period concentrations have remained stable below the AGQS.

G38S—Concentrations in well G38S have historically fluctuated above the AGQS but have decreased since third quarter 2004. With the exception of first and second quarter 2010 and second quarter 2011, dissolved chloride concentrations have been below the AGQS in well G38S since first quarter 2009.

G39S—Concentrations in well G39S have historically remained above the AGQS with periodic decreases below the AGQS. As shown by the trend graph provided in Appendix E, fluctuation of the dissolved chloride concentrations increased after fourth quarter 2007 and continued until the final sampling event first quarter 2009. Concentrations in well R39S were similar to well G39S but fluctuated less and began decreasing after third quarter 2009. With the exception of second quarter 2011, concentrations have continued to decrease. Furthermore, during the current review period concentrations in well R39S have remained below the AGQS for three consecutive quarters.

G41M—Dissolved chloride concentrations in well G41M significantly decreased beginning fourth quarter 2002, and subsequently fluctuated above and below the AGQS. During the current review period concentrations have remained stable below the AGQS since first quarter 2008.

Prior to and during the current review period, concentrations of dissolved chloride in several Lower Zone wells exceeded the AGQS. However, the majority of exceedences above the AGQS are due to fluctuating concentrations, which do not obscure the decreasing trends that can be observed in all GMZ wells. No increasing trends are noted for any wells that have been reported exceeding the AGQS during the current review period.

Chloride, total

Trends and concentrations for total chloride are comparable to those seen for dissolved chloride; concentrations from the same wells were identified as exceeding the AGQS for total chloride (87.51 mg/L) during the current review period. With the exception of a sporadic one-quarter exceedence (second quarter 2011) in well G38S, concentrations of total chloride have been stable below the AGQS in all GMZ wells since third quarter 2010.

Nitrate as N, dissolved

Concentrations above the AGQS (11.74 mg/L) were recorded in five Lower Zone wells (G03M, G16M, G33D, G35D, and G36S) during the current review period. All five wells are located along Kilbuck Creek which flows through several agricultural areas upgradient to the facility. The creek not only receives direct runoff from agricultural fields during precipitation events, but also is a gaining creak during periods of low flow; allowing mixing of groundwater and surface water thereby receiving groundwater potentially impacted by nitrogen based fertilizers applied to the agricultural fields. Concentrations in several wells fluctuate considerably, many below the AGQS. The exceedences referenced above and fluctuating concentrations are generally no greater than 12 mg/L and likely influenced by the creek.

Nitrate as N, total

Trends and concentrations for total nitrate are comparable to those seen for dissolved nitrate; concentrations from the same wells were identified as exceeding the AGQS for total nitrate (11.74 mg/L) during the current review period. As shown by the trend graph provided in Appendix E, the concentrations do fluctuate; however, almost all are below the AGQS. Both total and dissolved nitrate do not appear to have been impacted by the closure activities at the facility. Therefore, nitrate concentrations in the groundwater were not influenced by facility operations.

Potassium, total

Concentrations have exceeded the AGQS for total potassium (29.01 mg/L) in four Lower Zone wells (G35D, G38S, G41M, and R39S) during the current review period. However, with the exception of concentrations in well R39S during second and third quarter 2010, concentrations in all GMZ wells have been stable or decreasing below the AGQS since first quarter 2008. The significant decrease in concentrations in nearly all GMZ wells is readily apparent by visual inspection of the trend graph provided in Appendix E.

Organic Parameters (Lower Zone)

With the exception of a single exceedence of acetone in well G16M (fourth quarter 2009) and carbon disulfide in well G36S (fourth quarter 2010) organic parameter concentrations in all Lower Zone GMZ wells have been non-detect during the current review period. Each of the exceedences was recorded as non-detect the following quarter and concentrations are stable with no significant increasing or decreasing trends noted. Table 3 provides a summary of the exceedences during the current review period and Table 4 provides a table of the historical GMZ parameter analytical results.

5.2.2.1.2 Non-GMZ Parameters

During the current review period, some parameters not currently included in the GMZ list of parameters have exhibited concentrations exceeding the respective AGQS (Table 3). Trend graphs detailing the concentrations of the subject parameters in all Lower Zone wells are contained in Appendix E.

Inorganic Parameters (Lower Zone)

Chemical Oxygen Demand (COD)

Chemical oxygen demand (COD) is a measure of the amount of oxygen needed to fully oxidize an organic compound by the addition of a strong oxidizing agent under acidic conditions. The COD analysis is commonly used as an indirect measurement of the amount of organic compounds in water; it is not a specific chemical constituent and cannot differentiate between the type of organic present in a sample. The COD measurement exceeded the AGQS (50.04 mg/L) in well G41M during second quarter 2007 (confirmed by resample). However, the measurement was within the historic range of measurements of COD at well G41M and upon sampling second quarter 2008 had decreased to 6.9 mg/L.

<u>Chromium, dissolved</u>

The concentration of dissolved chromium in well G35D exceeded the AGQS (72 ug/L) during first quarter 2011. However, upon sampling the following quarter the parameter was not detected; the exceedence was not confirmed.

<u>Lead, dissolved</u>

The concentration of dissolved lead in well R39S exceeded the AGQS (4 ug/L) during third quarter 2010. However, upon sampling the following quarter the parameter was not detected; the exceedence was not confirmed.

<u>Magnesium, dissolved</u>

The concentration of dissolved magnesium exceeded the AGQS (170.41 mg/L) in Lower Zone well R39S during third quarter 2010. However, upon sampling the following quarter the concentration decreased below the AGQS and has since remained; the exceedence was not confirmed.

<u>pH (field)</u>

Field measurements of pH have increased above the AGQS range (5.4 to 8.1) in eight Lower Zone wells (G03M, G16M, G18D, G33D, G35D, G36S, G37D, and G41M) during the current review period. However, with the exception of fourth quarter 2011 and first quarter 2012 measurements in well G33D, all measurements were recorded within the permitted range during the following quarter. Furthermore, there are no increasing or decreasing trends apparent throughout the current review period.

<u>Selenium, total</u>

Concentrations of total selenium exceeded the AGQS (4 ug/L) in three Lower Zone wells (G35D, G38S, and G41M) during the current review period. The exceeding concentration recorded in G35D (second quarter 2007) was not confirmed by resample. Concentrations in wells G38S and G41M have periodically fluctuated above the AGQS during previous review periods. However, the exceedences of the AGQS during second quarter 2007 (confirmed by resample) decreased to non-detect during the second quarter 2008 sampling event. No other exceedences were recorded for this parameter in the subject wells and concentrations were stable throughout the current review period with no significant increasing trends noted.

5.2.3 Bedrock Zone

Previous investigations (Geotrans 1995, 1998, 1999) have shown that a slight upward gradient exists between the bedrock and the lower sand and gravel zone, making it unlikely that influences from landfill activities will affect groundwater quality within the bedrock. Wells G09M, G09D, G13D, G13S, G16D, G20D, and G41D are all screened within the dolomite underlying the facility. Wells G09M, G09D, G13S, G13D, and G20D are all upgradient to the Northern Unit and listed as background wells in the current operating permit. Several organic compounds (generally organic solvents) have historically been detected in bedrock wells G13S, G13D, G09M, and G09D. The subject detections have been largely attributed to conditions at the Acme Solvent site. As part of the 2004 GMZ evaluation, the Illinois EPA requested the area proximal to upgradient wells G09M and G09D be included in the GMZ due to elevated concentrations of 1,4-dichlorobenzene and total and dissolved iron. The modified vertical extent of the 2004 GMZ evaluation is presented in Figure 7. The vertical extent of the GMZ from the 2007 evaluation and the current 2012 evaluation are presented in Figures 9 and 12, respectively. Trend graphs illustrating parameter concentrations are provided in Appendix F.

The following sections discuss parameters that have exceeded the AGQSs during the current review period only. Parameters and related wells in which concentrations do not exceed the AGQS are not discussed.

5.2.3.1 Parameter Specific Trends

5.2.3.1.1 GMZ Parameters

Inorganic Parameters (Bedrock Zone)

Ammonia as N, dissolved

Only concentrations of dissolved ammonia in Bedrock Zone wells G13D and G13S exceeded the AGQS (0.9 mg/L) during the current review period. Concentrations in both wells are currently stable above the AGQS. As previously discussed, wells G13D and G13S are upgradient to the Northern Unit and monitor groundwater representative of conditions to the east of the facility. The subject wells are nested; the "D" and "S" designations refer to the screen interval as being deep and shallow, respectively. Both wells are screened in the dolomite bedrock. As shown in the trend graph, the concentrations in the deep well exceed those of the shallow wells. The shallow well would expect to reflect higher concentrations than the deep well if the landfill unit were influencing the groundwater quality at that location. Given the upgradient location of the wells and the fact that the deep well contains higher concentrations than the shallow well, the ammonia concentrations appear due to an offsite source.

Arsenic, dissolved

Concentrations in Bedrock Zone wells G09D, G13D, and G13S exceeded the AGQS for dissolved arsenic (2 ug/L) during the current review period. Concentrations in all three wells are currently stable above the AGQS with some fluctuation. As previously discussed, wells G09D, G13D, and G13S are upgradient to the Northern Unit and therefore monitor groundwater representative of conditions to the east of the facility.

Arsenic, total

Concentrations of total arsenic exceeded the AGQS (10 ug/L) during the current review period in Bedrock Zone wells G13D, G13S, and G20D. As shown by the trend graph provided in Appendix F, concentrations in well G13D have fluctuated significantly above the AGQS throughout the current review period. Although concentrations in wells G13D and G13S have increased over the last few quarters, concentrations remain within historic limits for the parameter. Wells G13D, G13S, and G20D are upgradient to the Northern Unit and therefore monitor groundwater representative of conditions to the east of the facility. Well G20D is located approximately 700 feet west of the landfill facility closer to the Acme Solvent site.

Boron, dissolved

Concentrations of dissolved boron have been recorded exceeding the AGQS (98 ug/L) during the current review period in Bedrock Zone wells G09D, G13D, and G13S. Concentrations have consistently and historically been below the AGQS in well G09D with the exception of first quarter 2007 (110 ug/L). However, upon sampling the following and subsequent quarters, concentrations decreased and have remained stable below the AGQS. Dissolved boron concentrations in well G13D have historically been stable below the AGQS until third quarter 2007 at which time concentrations began significant fluctuation above the AGQS. After peaking the third quarter 2010, concentrations have decreased significantly to the current concentration of 480 ug/L (first quarter 2012). Concentrations in well G13S, similar to well G13D, have historically been below the AGQS with periodic fluctuations above the AGQS until fourth quarter 2008 at which time concentrations increased. After reaching a maximum concentration of 470 ug/L during the second and third quarter 2011 sampling events, concentrations have decreased to the current concentration of 250 ug/L (first quarter 2012). As previously discussed, wells G09D, G13D, and G13S are upgradient to the Northern Unit and therefore monitor groundwater representative of conditions to the east of the facility. The increasing concentrations of dissolved boron during the current review period may be indicative of changing background groundwater quality. As discussed above, G13S and G13D are nested wells. Similar to dissolved ammonia concentrations, the highest dissolved boron concentrations occurs in the deep well (G13D). The screen interval for G13D is a greater distance from the waste unit. Additionally, nested wells G09M and G09D are located closer to the Northern Unit than G13S and G13D (See Figure 1). If the Northern Unit were affecting the groundwater quality at G13S and G13D, impacts would be detected at higher concentrations in G09M and G09D. However, this is not occurring.

Boron, total

Trends and concentrations for total boron are comparable to those seen for dissolved boron; concentrations from the same wells (except for G09D) were identified as exceeding the AGQS for total boron (200 ug/L) during approximately the same time period within the current review period. Similar to dissolved concentrations, total boron concentrations have most recently been decreasing.

Chloride, dissolved

Concentrations of dissolved chloride have exceeded the AGQS (87.51 mg/L) in Bedrock Zone wells G09D, G09M, G13D, and G13S during the current review period.

G09D—Concentrations in well G09D have occasionally exceeded the AGQS until first quarter 2009 at which time concentrations remained above the AGQS. Since second quarter 2011 concentrations have decreased below the AGQS and continue to decrease to the current concentration of 65 mg/L (first quarter 2012).

G09M—As shown by the trend graph provided in Appendix F, dissolved chloride concentrations in upgradient Bedrock Zone well G09M have been steadily increasing since commencement of sampling first quarter 1997. Currently (first quarter 2012) the concentration was recorded as 600 mg/L.

G13D—Dissolved chloride concentrations in well G13D were stable slightly above the AGQS during the previous review period and then decreased below the AGQS from second quarter 2007 to fourth quarter 2008 (with the exception of fourth quarter 2007). Concentrations have fluctuated above the AGQS since first quarter 2009. An uncharacteristic spike occurred during second quarter 2010 (830 mg/L), followed by a significant decrease in concentrations over the next four quarters. Dissolved chloride concentrations in well G13D have continued to decrease to the current concentration of 160 mg/L (first quarter 2012).

G13S—Dissolved chloride concentrations in well G13S have increased with respect to previous review periods but remained relatively stable during the current review period. As shown by the trend graph provided in Appendix F, concentrations in well G13S increased above the AGQS during third quarter 2007 and reached a maximum concentration during second quarter 2008 (220 mg/L). Concentrations then decreased until second quarter 2010 at which time concentrations began increasing again. Currently, the concentration of dissolved chloride in well G13S is decreasing but remains above the AGQS. It is anticipated the dissolved chloride concentration will decrease below the AGQS within the next two quarters.

The exceedences of dissolved chloride concentrations above the AGQS have primarily occurred during the current review period in Bedrock Zone wells G09D, G09M, G13D, and G13S. However, all Bedrock Zone wells with exceedences above the AGQS are upgradient wells for the Northern Unit which monitor groundwater conditions to the east of the facility. The increasing concentrations of dissolved chloride during the current review period, similar to boron concentrations, are indicative of background groundwater quality.

Chloride, total

Trends and concentrations for total chloride are comparable to those seen for dissolved chloride; concentrations from the same wells were identified as exceeding the AGQS for total chloride (87.51 mg/L) during approximately the same time period within the current review period.

Nitrate as N, total

Concentrations of total nitrate in all Bedrock Zone GMZ wells have historically remained below the AGQS (11.74 mg/L). During the current review period the concentration of total nitrate increased above the AGQS in well G41D (second quarter 2009). However, upon sampling the following quarter the concentration decreased below the AGQS where it has remained since; the exceedence was not confirmed. No other exceedences were recorded for this parameter in the subject wells and concentrations have been stable throughout the current review period with no significant increasing trends noted.

Potassium, total

Concentrations of total potassium have periodically exceeded the AGQS (29.01 mg/L) during the current review period in Bedrock Zone wells G13D and G13S. Concentrations in the subject wells have historically remained stable below the AGQS until the current review period at which time concentrations began fluctuating significantly above and below the AGQS. Wells G13D and G13S are both upgradient to the Northern Unit and monitor groundwater representative of conditions to the east of the facility. The fluctuating concentrations above the AGQS are indicative of background groundwater quality. As discussed above, G13S and G13D are nested wells. Similar to dissolved ammonia and boron concentrations, the highest dissolved boron concentrations occurs in the deep well (G13D). The screen interval for G13D is a greater distance from the waste unit.

Sodium, total

Concentrations of total sodium have exceeded the AGQS (164.79 mg/L) during the current review period in wells G09D, G09M, and G13D. Concentrations in well G09D have historically remained stable below the AGQS until increasing fourth quarter 2008. A steady concentration increase is noted for total sodium with the exception of a concentration spike above the AGQS during first quarter 2010. Upon sampling the following quarter, concentrations decreased and continued to follow the previously established increasing trend. Concentrations have been decreasing since second quarter 2011 to the current concentration of 50 mg/L (first quarter 2012). Total sodium concentrations in well G09M have been steadily increasing (below the AGQS) since commencement of sampling during second quarter 1997. Concentrations have continued to increase during the current review period and have been above the AGQS since second quarter 2008. The current concentration recorded first quarter 2012 (270 mg/L) is the maximum concentration of total sodium in well G09M. Concentrations in well G13D have historically remained stable below the AGQS until the current review period at which time significant fluctuation is noted. Concentrations increased since second quarter 2008 until reaching a maximum concentration of 730 mg/L during second quarter 2010. Since second quarter 2010 concentrations have continued to decrease and have been below the AGQS since second quarter 2011.

Total sodium concentrations have generally been increasing during the previous review periods as well as current review period in Bedrock Zone GMZ wells G09D, G09M, and G13D. Since the only wells with concentrations exceeding the AGQS are upgradient to the Northern Unit, the concentrations are indicative of background groundwater quality.

Organic Parameters (Bedrock Zone)

1,4-Dichlorobenzene

Concentrations of 1,4-Dichlorobenzene have exceeded the AGQS (5 ug/L) in Bedrock Zone well G09D, G09M, and G13S during the current review period. Concentrations in well G09D have consistently exceeded the AGQS until most recently (fourth quarter 2011) at which time concentrations decreased to 1.1 ug/L. Concentrations in well G09M have been detected but have remained stable throughout the current review period until fourth quarter 2010. The concentration decreased below the AGQS during second quarter 2011, but again exceeded the AGQS during fourth quarter 2011. A similar trend in 1,4-dichlorobenzene concentrations is noted for G13S which have been detected since fourth quarter 2010 and have exceeded the AGQS since second quarter 2011. As previously discussed, wells G09D, G09M, and G13S are upgradient to the Northern Unit and therefore monitor groundwater conditions to the east.

Tetrahydrofuran

Concentrations of tetrahydrofuran have exceeded the AGQS (42 ug/L) in well G13D during the second quarter 2009 and second quarter 2010 sampling events. However, upon sampling the following quarter, concentrations have decreased below the AGQS and have remained since. Well G13D is upgradient to the Northern Unit.

5.2.3.1.2 Non-GMZ Parameters

During the current review period, some parameters not currently included in the GMZ list of parameters have exhibited concentrations exceeding the respective AGQS (Table 3). Trend graphs detailing the concentrations of the subject parameters in all Bedrock Zone wells are contained in Appendix F.

Inorganic Parameters (Bedrock Zone)

Lead, dissolved

Concentrations of dissolved lead have exceeded the AGQS (4 ug/L) during the current review period in wells G09D and G13D. Concentrations in wells G09D and G13D have consistently been non-detect until second quarter 2011 and third quarter 2010, respectively. However, upon sampling the following quarter the concentration of dissolved lead was either non-detect (G09D) or below the AGQS (G13D). Dissolved lead concentrations in wells G09D and G13D, which are both upgradient to the Northern Unit and monitor groundwater conditions to the east, are currently non-detect.

Magnesium, dissolved

Concentrations of dissolved magnesium have been below the AGQS (170.41 mg/L) throughout the current review period in all Bedrock Zone wells with the exception of an exceedence recorded during second quarter 2010 in well G13D. Since second quarter 2010 concentrations have stabilized at 110 mg/L.

Magnesium, total

Concentrations of total magnesium exceeded the AGQS (109.5 mg/L) in upgradient well G13D during second quarter 2007 (confirmed by resample). However, the concentration decreased below the AGQS during the following sampling event (second quarter 2008).

Manganese, dissolved

Concentrations of dissolved manganese exceeded the AGQS (1,479.53 ug/L) in upgradient wells G13D and G13S during the current review period. Concentrations in wells G13D and G13S have historically been below the AGQS until third quarter 2007 and fourth quarter 2007, respectively. However, upon sampling the following quarter the concentration of dissolved manganese decreased below the AGQS.

Mercury, dissolved

Concentrations of dissolved mercury in upgradient well G13S exceeded the AGQS (0.2 ug/L) during second quarter 2011 (0.24 ug/L). However, upon sampling the following quarter, concentrations returned to non-detect; the detection was not confirmed.

pH (field)

Measurements of pH in Bedrock Zone wells have generally fallen within the permitted range (5.4-8.1 units) during the current review period. Measurements in upgradient well G20D were above the range during third quarter 2007 (8.28 units), second quarter 2008 (8.62 units), and fourth quarter 2008 (8.11 units). Measurements of pH have decreased and stabilized within the permitted range since fourth quarter 2008. Measurements of pH in well G41D have been within the permitted range throughout the current review period with the exception of third quarter 2007 (8.22 units). Measurements of pH have been within the permitted range since the single exceedence.

Selenium, total

Concentrations of total selenium exceeded the AGQS (4 ug/L) in upgradient wells G09M and G13D during the current review period. However, the only sampling events during which total selenium was analyzed for were during second quarter 2007 and second quarter 2008. Concentrations from well G09M exceeded the AGQS during both sampling events and well G13D exceeded the AGQS during only the second quarter 2007 sampling event.

Sulfate, dissolved

Concentrations of dissolved sulfate in upgradient well G13D fluctuated above and below the AGQS (360 mg/L) until third quarter 2009. Concentrations have not exceeded the AGQS since third quarter 2009.

Sulfate, total

Concentrations of total sulfate exceeded the AGQS (179.37 mg/L) in upgradient wells G13D and G13S during the current review period. However, the only sampling events during which total sulfate were analyzed for were during second quarter 2007 and second quarter 2008. Concentrations from well G13D exceeded the AGQS during second quarter 2007 (unconfirmed by resample) and again during second quarter 2008. Concentrations in well G13S also exceeded the AGQS during second quarter 2007 (confirmed by resample) but were recorded below the AGQS during second quarter 2009.

Vanadium, total

Concentrations of total vanadium exceeded the AGQS (100 ug/L) in well G13D during the second quarter 2007 sampling event (confirmed by resample). Concentrations decreased below the AGQS during subsequent sampling events.

Organic Parameters (Bedrock Zone)

Acetone

Concentrations of acetone have exceeded the AGQS (10 ug/L) in Bedrock Zone wells G09D and G13D during the current review period. However, upon sampling the following quarter concentrations decreased below the AGQS. Concentrations in both upgradient wells are stable with no significant increasing or decreasing trends noted.

Benzene

Concentrations of benzene have exceeded the AGQS (2.8 ug/L) in Bedrock Zone wells G13D and G13S during the current review period. Concentrations in G13D have historically been non-detect until second quarter 2011 (1.7 ug/L). Upon sampling during fourth quarter 2011 the concentration increased above the AGQS to 3.7 ug/L. However, upon sampling the following quarter (first quarter 2012) the concentration decreased to 2.7 ug/L. Similar to well G13D, benzene concentrations in well G13S have historically been non-detect until the current review period. Concentrations have increased above the AGQS since fourth quarter 2010. Both wells are upgradient and monitor groundwater representative of conditions to the east of the Northern Unit.

Carbon Disulfide

Concentrations of carbon disulfide have exceeded the AGQS (5 ug/L) in wells G09D, G13S, and G20D during the current review period. However, the exceeding concentrations were all recorded during fourth quarter 2010 after which time concentrations decreased to non-detect the following quarter and therefore were not confirmed. Concentrations in each well have been non-detect since fourth quarter 2010.

Chlorobenzene

Concentrations of chlorobenzene have exceeded the AGQS (5 ug/L) in Bedrock Zone wells G09D, G09M, G13D, and G13S during the current review period.

G09D—Concentrations in well G09D have been detected throughout the current review period and increased above the AGQS during second quarter 2009. However, the exceedence was not confirmed. Concentrations increased above the AGQS again during second quarter 2010 and after reaching a maximum concentration of 11 ug/L during fourth quarter 2010, decreased but remained above the AGQS.

G09M—Concentrations in well G09M have also been detected throughout the current review period, increasing above the AGQS since fourth quarter 2010. A maximum concentration of 6.6 ug/L was recorded most recently during fourth quarter 2011.

G13D—Chlorobenzene concentrations in well G13D have been detected since second quarter 2010 and have been above the AGQS since second quarter 2011. A maximum concentration of 14 ug/L was recorded most recently during fourth quarter 2011.

G13S—Chlorobenzene concentrations in well G13S have been detected since fourth quarter 2009 and have exceeded the AGQS consistently since second quarter 2010. A maximum concentration of 29 ug/L was recorded most recently during fourth quarter 2011. As previously discussed, wells G09D, G09M, G13D, and G13S are upgradient to the Northern Unit and monitor groundwater conditions to the east. The increasing trends noted for chlorobenzene in the subject wells are likely indicative of background groundwater quality.

cis-1,2-Dichloroethene

Concentrations in well G20D have consistently been above the AGQS (5 ug/L) during previous review periods as well as the current review period. However, no increasing trends are present and the current concentrations are within historic limits for this parameter. Well G20D is located east of Lindenwood road (approximately 700 feet east of the Northern Unit), upgradient to the Northern Unit, and monitors groundwater representative of conditions to the east of the facility. This compound is also an organic solvent likely attributable to the Acme Solvent site.

Methylene Chloride

Concentrations of methylene chloride have exceeded the AGQS (8 ug/L) in well G09M during the current review period. However, concentrations have consistently been non-detect with the exception of second quarter 2007. The exceedence recorded during second quarter 2007 was not confirmed by resample and concentrations have not been detected since that time. Methylene chloride is used in the laboratory during the analyses process. Given the one-time detection, it is likely the second quarter 2007 result was a laboratory artifact.

6. GMZ EVALUATION

An evaluation of the GMZ extent has been completed. Consistent with the 1995, 2004, and 2007 applications, the horizontal and vertical extent of the GMZ varies by constituent. Thus, the GMZ was defined by the constituents that encompass the largest area and include all detectable leachate components above their respective AGQSs. Each GMZ parameter that was detected above the applicable AGQS was identified on a concentration exceedence map such that the extent of the groundwater concentrations present could be determined. The referenced maps are contained in Appendix G (Upper Zone) and Appendix H (Lower Zone). All downgradient bedrock wells exhibited groundwater concentrations for the GMZ parameters below their respective AGQSs with the exception of total nitrate in well G41D. As noted in the discussion regarding GMZ parameters in the Bedrock Zone (Section 5.2.3.1.1), the exceedence of the AGQS for total nitrate in well G41D was not confirmed by resample and the concentration subsequently decreased below the AGQS upon sampling the following quarter (third quarter 2009). Therefore, no concentration exceedence maps have been generated for the Bedrock Zone.

6.1 Upper Zone

The parameters used to establish the extent of the GMZ were evaluated in prior sections of this report to verify the concentrations were associated with the facility and not attributable to temporal variability or offsite sources. All individual GMZ parameters have been compared with the 2004 and 2007 GMZ boundaries to determine whether the affected area has increased or decreased in size. The 2007 Upper Zone GMZ extent map, provided originally as Figure 9 of Application Log No. 2007-181, was revised June 2008 in an addendum and provided as Figure 2. The revised GMZ extent map from June 2008 (for both the Upper and Lower Zones) is provided herein as Figure 8. The approximated extents of parameter specific concentrations exceeding the AGQSs in the Upper Zone are contained in Appendix G.

The 2004 GMZ boundary in the Upper Zone was largely controlled by four parameters (arsenic, ammonia, boron, and chloride) with generally the same limits of occurrence. The 2007 GMZ boundary was largely controlled by three primary parameters (arsenic, ammonia, and boron). As shown by the composite concentration exceedence map provided as Figure G-8 in Appendix G, the 2012 GMZ boundary appears to be controlled by arsenic. The occurrence of total arsenic generally dictates the shape of the horizontal extent of the Upper Zone GMZ (Figure G-2 in Appendix G), encompassing well G41S. The 2012 extent of arsenic is nearly the same as illustrated in the 2004 GMZ evaluation with the exception of the area near R03S, in which concentrations of arsenic were below the AGQS during first quarter 2012. Although well G40S was dry at the time of sampling, concentrations had decreased below the AGQS prior to the well becoming dry. Therefore, the extent as shown does not include well G40S. Furthermore, due to the direction of groundwater movement in the areas west and north of Kilbuck Creek, which have been shown to be northward, the extent of total arsenic as shown does not include wells G52S and G54S. As stated previously, arsenic is naturally occurring in groundwater and is highly sensitive to oxygen reducing conditions. The groundwater at the facility is unconfined and shallow. Movement beneath a structure (i.e., waste unit) is sufficient to cause anaerobic conditions, which can cause the arsenic concentrations to increase without any direct influence from the waste unit. Arsenic concentrations detected in downgradient wells do not necessarily indicate a direct impact from the waste unit.

The 2012 extent of ammonia has decreased significantly from the 2004 and 2007 extents (Figure G-1 in Appendix G) resulting in a reduction of the perimeter to the southwest, west, and northwest of the Northern Unit. Although there were no exceedences above the AGQS for ammonia during first quarter 2012, concentrations in wells G40S and G51S (dry at the time of sampling) were above the AGQS when last sampled. Therefore, the two wells have been included within the GMZ extent.

The occurrence of boron decreased significantly from the 2004 and 2007 extents (Figure G-3 in Appendix G). Concentrations in R03S, G34S, G35S, and G41S decreased resulting in a reduction of the perimeter to the west and northwest of the Northern Unit. Although G37S was inaccessible during the time of sampling, concentrations of arsenic (dissolved and total) were consistently below the AGQS for several sampling events; therefore, the 2012 extent of boron excludes G37S and is limited to the north of the Northern Unit (encompassing wells G40S and G51S). Although wells G40S and G51S were dry at the time of sampling, concentrations were above the AGQS when last sampled. Therefore, the two wells have been included within the GMZ extent.

Figure G-4 in Appendix G defines the extent of chloride concentrations in the Upper Zone. The extent of chloride is similar to that of ammonia, boron, and potassium. However, concentrations of total chloride exceeded the AGQS in well R42S during first quarter 2012. Exceedences of the AGQS in 2012 do not extend to well G41S and therefore the west and northwest GMZ perimeters have been reduced from the 2007 boundary. Concentrations of chloride decreased below the AGQS in well G34S and although inaccessible during the time of sampling, concentrations in well G37S were below the AGQS for several sampling events. Therefore, the 2012 perimeter excludes the two wells.

With the exception of dissolved and total nitrate in well G130, there have been no additional parameters exceeding their respective AGQSs during 2012; the revised perimeters for total potassium, total sodium, and 1,4-dichlorobenzene include well G51S (Figures G-5 through G-7 of Appendix G). Although well G51S was dry at the time of sampling, concentrations of the subject parameters were exceeding the AGQS when last sampled.

The overall horizontal extent of the Upper Zone GMZ has not changed significantly since 2007, although a significant reduction in the recorded concentrations and individual parameter extents is evident (Figures G-1 through G-7 in Appendix G). The lines depicted in Figure G-8 in Appendix G represent a compilation of total and dissolved concentrations which exceeded the AGQSs. Figure 10 identifies the actual extent of the 2012 GMZ based on the outermost extent of the parameters exceeding the AGQS within the Upper Zone. With the exception of total arsenic in wells G52S and G54S, the outermost extent incorporates all areas exhibiting concentrations above the permitted AGQSs and represents the furthest extent of those elevated concentrations. It should be noted that “clean” areas (areas where concentrations of the GMZ parameters are below the permitted AGQSs) exist within the revised GMZ extent. The revised GMZ boundaries do not constitute an increase in the size of the GMZ.

6.2 Lower Zone

In addition to determining extent, the GMZ parameters were used to verify the source of the elevated concentrations was associated with the facility and not attributable to temporal variability or off-site sources. All individual GMZ parameter extents have been shown in comparison to the 2004 and 2007 GMZ boundaries to determine whether the impacted area has increased or decreased in size. The 2007 Lower Zone GMZ extent map, originally provided as

Figure 10 of Application Log No. 2007-181, was revised in an addendum (June 2008) and was provided as Figure 2. The revised GMZ extent map from June 2008 (for both the Upper and Lower Zones) is provided herein as Figure 8. The approximated extents of parameter specific concentrations exceeding the AGQSs in the Lower Zone are contained in Appendix H.

The occurrence of dissolved ammonia and total arsenic generally dictates the shape of the horizontal extent of the Lower Zone GMZ (Figures H-1, and H-2 of Appendix H). Elevated concentrations of dissolved ammonia were noted only in well G34D during the first quarter 2012 sampling event. Although well R39S was dry at the time of sampling, dissolved ammonia concentrations were exceeding the AGQS when last sampled and well G34S is therefore encompassed by the GMZ extent. The shift in the concentration of dissolved ammonia from well G16M to well G34D may be the result of reduction and migration in the downgradient direction. Since wells G38S, G41M, and G16M are no longer exceeding the AGQS the extent of exceedence for ammonia has decreased significantly from 2007.

Total arsenic concentrations exceeded the AGQS in wells G33D, G35D, and G38S. As shown in Figure H-2 of Appendix H, exceedences of the AGQS have previously been confined to wells G41M and G38S. The increased extent of total arsenic exceedences in wells west of Kilbuck Creek (wells G33D and G35D) and east of Kilbuck Creek (wells G03M and G38S) are due to periodic fluctuations above the AGQS.

As in the 2004 and 2007 extents, boron was not detected above the AGQS west of Kilbuck Creek. Since the 2007 evaluation, concentrations have decreased in GMZ wells east of Kilbuck Creek and as a result, the 2012 GMZ boron extent excludes all GMZ wells. Similar to boron concentrations, chloride concentrations have also decreased resulting in exclusion of all GMZ wells from the 2012 chloride extent.

Although occasional exceedences of the nitrate AGQS have been recorded in Lower Zone monitoring wells during the current review period, no extent for the GMZ has been determined. The sporadic elevated concentrations are likely the result of a hydraulic connection between the groundwater and surface water of Kilbuck Creek and the associated wetland area.

The overall horizontal extent of the Lower Zone GMZ has not changed significantly since 2007 although a reduction in the recorded concentrations and individual parameter extents is evident (Figures H-1 through H-5 in Appendix H). The lines depicted in Figure H-6 in Appendix H represent a compilation of total and dissolved concentrations which exceed the AGQSs. Figure 11 identifies the actual extent of the 2012 GMZ based on the outermost extent of the parameters exceeding the AGQS within the Lower Zone. The outermost extent incorporates all areas exhibiting concentrations above the permitted AGQSs and represents the furthest extent of those elevated concentrations. It should be noted that “clean” areas (areas where concentrations of the GMZ parameters are below the permitted AGQSs) exist within the revised GMZ extent. The revised GMZ boundaries do not constitute an increase in the size of the GMZ.

6.3 Bedrock Zone

In 1995 it was determined that contamination of the bedrock had not occurred beneath or downgradient to the Northern Unit. However, as part of the 2004 GMZ evaluation, the Illinois EPA requested the area proximal to upgradient wells G09M and G09D be included in the GMZ due to elevated concentrations of several inorganic parameters and 1,4-dichlorobenzene. Based on analytical data from the current review period, concentrations have not been detected above the AGQS in any downgradient Northern Unit Bedrock Zone wells (i.e., G16D and G41D). The GMZ extent will remain as permitted in the 2004 GMZ evaluation.

7. CONCLUSIONS AND RECOMMENDATIONS

As discussed in Section 1, the 1995 Permit Renewal incorporated the remedial actions chosen to remedy Winnebago Landfill's impacted groundwater. The GIA included in the application was directed toward assessing the potential impacts of the facility after completion of the remedial activities (final cover and leachate/gas extraction systems) and was used to evaluate the effectiveness of the remedial design. Final cover was completed in July 2001 and the necessary upgrades to the leachate/gas extraction system were completed in 2002, finalizing the approved remedial measures. The GIA stated that the existing impacted groundwater would take an estimated five to ten years to achieve background concentrations. It was inferred that this timeline would commence upon completion of the remediation systems. Therefore, the effect of the remedial measures would become apparent sometime between 2007 and 2012. Although a few parameters are still detected at concentrations above the AGQSs, significant improvements to groundwater quality are evident as demonstrated by the decreases in individual parameter concentrations and GMZ extents. In addition, the organic constituents which prompted the remedial actions are typically not detected in groundwater downgradient of the facility. Based on the number of wells in and surrounding the Northern Unit and their respective screened intervals and parameter lists, no additional investigations are proposed at this time. Evaluation of the GMZ should continue as previously permitted in Condition VIII.23 of Permit No. 1991-138-LF, Modification 53. The GMZ shall continue to be monitored in accordance with current requirements. In the event a modification to the remedial performance monitoring program is necessitated, a permit application will be submitted identifying the subject changes.

TABLES

Table 1
Winnebago Landfill
Surface Water Exceedences
First Quarter 2007 - First Quarter 2012

Well ID	Parameter	Units	GW List	AGQS	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09
SG1	1,1-Dichloroethene	ug/l	G2	2.5		< 1				< 1		8		< 1	
SG3	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	0.098	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
SG4	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.13	< 0.09	< 0.09	< 0.09	0.12	< 0.09	< 0.09	0.55	0.18	< 0.09	
SG3	Atrazine	ug/l		3		< 0.2				3.9	< 0.2				
SG1	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	12	H 16	7.4	5.6	11	12	8.9	7.2	8.4	9.5	11
SG3	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	13	H 16	7	6.4	12	13	9.6	7.6	9	9.4	10
SG4	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	H 13	17	7.8	7.9	12	12	9.2	7.4	9	9.3	
SG1	Nitrate as N, total	mg/l	GMZ	11.7389	12	17	7.5	5.7	11	13	9	7.4	9.6	10	11
SG3	Nitrate as N, total	mg/l	GMZ	11.7389	13	17	7	5.9	12	14	9.5	7.5	9.2	9.9	10
SG4	Nitrate as N, total	mg/l	GMZ	11.7389	H 13	17	7.8	7.7	12	12	9.2	7.4	9	9.4	
SG1	pH (field)	units	G1	5.4 - 8.1	7.97	7.53	8.39	7.95	7.79	7.58	6.86	8.19	7.07	7.5	7.84
SG3	pH (field)	units	G1	5.4 - 8.1	8.07	7.55	8.62	7.92	7.9	8.04	7.16	8.33	7.56	7.5	7.83
SG4	pH (field)	units	G1	5.4 - 8.1	7.86	7.51	8.66	8.23	7.8	7.51	7.21	8.02	7.6	8.1	
SG3	Polychlorinated Biphenyls(PCBs)	ug/l		2.5		< 0.5				3.9					

Well ID	Parameter	Units	GW List	AGQS	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
SG1	1,1-Dichloroethene	ug/l	G2	2.5	< 1		< 1		< 1		< 1		< 1	
SG3	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09		< 0.09	< 0.09	< 0.09	3.1	< 0.1	< 0.1	< 0.1
SG4	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	0.85	3.1	< 0.09	0.23	0.26	< 0.1	< 0.1		
SG3	Atrazine	ug/l		3										
SG1	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.1	8.1	7.1	7.4	5.7		7.7	6.5		
SG3	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6	7.6		8.2	6.8	5.9	7.4	6.7		7.9
SG4	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6	8.1	6.8	7.3	6	6.7	7.5	6.5		
SG1	Nitrate as N, total	mg/l	GMZ	11.7389	6	8.6	7.1	7.4	5.7		7.4	6.5	8.7	
SG3	Nitrate as N, total	mg/l	GMZ	11.7389	6.1	7.9		7.7	7.1	6	7.7	6.6	8.9	7.8
SG4	Nitrate as N, total	mg/l	GMZ	11.7389	6	8.2	6.8	7.3	5.8	6.4	7.5	6.3		
SG1	pH (field)	units	G1	5.4 - 8.1	7.09	8.27	7.68	6.9	6.99		7.95	7.41	6.95	
SG3	pH (field)	units	G1	5.4 - 8.1	7.13	7.82	7.82	7.59	8.24	7.3	8.48	7.36	7.76	7.07
SG4	pH (field)	units	G1	5.4 - 8.1	7.11	8.24	7.6	7.77	7.45	7.31	8.43	7.61		
SG3	Polychlorinated Biphenyls(PCBs)	ug/l		2.5										

Note: A highlighted cell indicates an exceedence of the AGQS value.
Andrews Engineering, Inc.

J:\1990\90-114 (Winnebago)\MON\Sig Mods\GMZ 5 yr (2012)\Table 1
SW-5 yr exceedences

Table 2
Winnebago Landfill
GMZ Wells and Parameters

GMZ Wells

Upper Zone	Lower Zone	Bedrock Zone
(G119)	G03M	G09D
G130	G16M	G09M
(G15S)	(G18D)	G13D
G17S	G33D	G13S
(G18S)	G34D	(G14D)
G33S	G35D	G16D
G34S	G36S	G20D
G35S	G37D	G41D
G37S	G38S	
G40S	(G39S)	
G41S	R39S	
G50S	G41M	
G51S	G52M	
G52S	G54M	
G54S		
R03S		
R42S		
SG1+		
SG3+		
SG4+		

( ) Well has been abandoned and/or replaced
- G14D was abandoned in 2005
- G15S was replaced by G51S in December 2008
- G119 was replaced by G50S in December 2008
- G39S was replaced by R39S in January 2009
- G18S and G18D were abandoned July 2011

\+ Surface water collection point

GMZ Parameters

Quarterly	Annual
Ammonia as N, dissolved	1,2,3-Trichlorobenzene
Ammonia as N, total	1,2,4-Trichlorobenzene
Arsenic, Dissolved	1,4-Dichlorobenzene
Arsenic, total	Ethylbenzene
Barium, total	Tetrahydrofuran
Boron, Dissolved	
Boron, total	
Chloride, Dissolved	
Chloride, total	
Fluoride, total	
Nitrate as N, dissolved	
Nitrate as N, total	
Potassium, total	
Sodium, total	

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr07	1stQtr07re	2ndQtr07	2ndQtr07re	3rdQtr07	4thQtr07	4thQtr07re	1stQtr08	1stQtr08re	2ndQtr08	3rdQtr08	4thQtr08
Bedrock	Upgradient	G09D	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5			7							7		7
Bedrock	Upgradient	G09M	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5			2							4		2.6
Bedrock	Upgradient	G13S	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5			< 1							< 1		< 1
Bedrock	Upgradient	G09D	Acetone	ug/l	G2	Organic	10			< 10							< 10		< 5
Bedrock	Upgradient	G13D	Acetone	ug/l	G2	Organic	10			< 10							< 10		< 10
Bedrock	Downgradient	G16D	Acrylonitrile	ug/l	G2	Organic	10			< 5							22	< 10	< 5
Bedrock	Upgradient	G13D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	0.24		0.45		0.12	0.28		< 0.09		0.36	5.8	8.4
Bedrock	Upgradient	G13S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09		0.22		0.094	0.17		0.33		0.22	0.45	0.51
Bedrock	Upgradient	G09D	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	3.9		1.2		1	1.2		< 1		1.4	1.1	1.1
Bedrock	Upgradient	G13D	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	1.1		1.6		15	2.3		1.8		9.5	13	3.8
Bedrock	Upgradient	G13S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	1.8		1.8		1.2	1.6		1.6		2.3	1.6	7.6
Bedrock	Upgradient	G13D	Arsenic, total	ug/l	GMZ	Inorganic	10	1.2		21		21	18		12		27	16	16
Bedrock	Upgradient	G13S	Arsenic, total	ug/l	GMZ	Inorganic	10	1.8		3.9		1.8	2.3		2.6		2.4	2.6	5.6
Bedrock	Upgradient	G20D	Arsenic, total	ug/l	GMZ	Inorganic	10	10		< 1		16	6.2		4.8		< 1	< 1	1
Bedrock	Upgradient	G13D	Benzene	ug/l	G2	Organic	2.8			< 1							< 1		< 1
Bedrock	Upgradient	G13S	Benzene	ug/l	G2	Organic	2.8			< 1							< 1		< 1
Bedrock	Upgradient	G09M	Biochemical Oxygen Demand	mg/l		Inorganic	4.04			15	6.7						17		
Bedrock	Upgradient	G13D	Biochemical Oxygen Demand	mg/l		Inorganic	4.04			< 4							5.8		
Bedrock	Upgradient	G13S	Biochemical Oxygen Demand	mg/l		Inorganic	4.04			4.3	< 4						< 4		
Bedrock	Upgradient	G09D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	110		47		42	46		40		47	42	48
Bedrock	Upgradient	G13D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	59		74		220	100		110		130	410	340
Bedrock	Upgradient	G13S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	87		87		69	88		77		96	90	100
Bedrock	Upgradient	G13D	Boron, total	ug/l	GMZ	Inorganic	200	54		190			120		120		140	390	320
Bedrock	Upgradient	G13S	Boron, total	ug/l	GMZ	Inorganic	200	92		92		74	85		86		82	94	110
Bedrock	Upgradient	G09D	Carbon disulfide	ug/l	G2	Organic	5			< 1							< 1		< 1
Bedrock	Upgradient	G13S	Carbon disulfide	ug/l	G2	Organic	5			< 1							< 1		< 1
Bedrock	Upgradient	G20D	Carbon disulfide	ug/l	G2	Organic	5			< 1							< 1		< 1
Bedrock	Upgradient	G13D	Chemical Oxygen Demand	mg/l		Inorganic	50.04			8.6							62		
Bedrock	Upgradient	G13S	Chemical Oxygen Demand	mg/l		Inorganic	50.04			100	< 6						47		
Bedrock	Upgradient	G09D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	57		31		98	23		23		37	39	61
Bedrock	Upgradient	G09M	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	370		430		200	380		430		400	460	450
Bedrock	Upgradient	G13D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	97		40		60	100		34		19	37	67
Bedrock	Upgradient	G13S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	66		54		100	120		120		220	150	140
Bedrock	Upgradient	G09D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	33		36		140	48		22		45	35	58
Bedrock	Upgradient	G09M	Chloride, total	mg/l	GMZ	Inorganic	87.51186	380		420		200	400		460		430	460	450
Bedrock	Upgradient	G13D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	100		38		57	100		31		26	32	64
Bedrock	Upgradient	G13S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	65		56		210	120		120		200	160	140
Bedrock	Upgradient	G09D	Chlorobenzene	ug/l	G2	Organic	5			3							5		5
Bedrock	Upgradient	G09M	Chlorobenzene	ug/l	G2	Organic	5			2							3		2.2
Bedrock	Upgradient	G13D	Chlorobenzene	ug/l	G2	Organic	5			< 1							< 1		< 1
Bedrock	Upgradient	G13S	Chlorobenzene	ug/l	G2	Organic	5			< 1							< 1		< 1
Bedrock	Upgradient	G20D	cis-1,2-Dichloroethene	ug/l	G2	Organic	5			19	13						10		19
Bedrock	Upgradient	G09D	Lead, Dissolved	ug/l	G1	Inorganic	4	< 1		< 1		< 1	< 1		< 1		< 1	< 1	< 1
Bedrock	Upgradient	G13D	Lead, Dissolved	ug/l	G1	Inorganic	4	< 1		< 1		< 1	< 1		< 1		< 1	< 1	< 1
Bedrock	Upgradient	G13D	Magnesium, dissolved	mg/L	G1		170.41											79	93
Bedrock	Upgradient	G13D	Magnesium, total	mg/l		Inorganic	109.5			190	270						100		
Bedrock	Upgradient	G13D	Manganese, Dissolved	ug/l		Inorganic	1479.53	490		660		1800	1100		270		770		
Bedrock	Upgradient	G13S	Manganese, Dissolved	ug/l		Inorganic	1479.53	710		1100		1100	1500	1300	1300		680		
Bedrock	Upgradient	G13S	Mercury, dissolved	ug/L	G1		0.2											< 0.2	< 0.2
Bedrock	Upgradient	G09M	Methylene Chloride	ug/l	G2	Organic	8			16	< 5						< 5		< 2.5
Bedrock	Downgradient	G41D	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	4.5		6.1		7.7	9.5		9.8		9.1	9.2	5.3
Bedrock	Downgradient	G16D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.62		7.84		7.96	7.28		7.83		6.77	7.41	7.67
Bedrock	Upgradient	G20D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.62		7.71		8.28	7.73		8.1		8.62	7.23	8.11
Bedrock	Downgradient	G41D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.5		7.25		8.22	7.59		7.65		7.16	7.06	7.84
Bedrock	Upgradient	G13D	Potassium, total	mg/l	GMZ	Inorganic	29.00582	3.2		37		46	14		27		21	40	37
Bedrock	Upgradient	G13S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	12		12		7.1	12		12		12	6.6	8.4
Bedrock	Upgradient	G09M	Selenium, total	ug/l		Inorganic	4			5.6	7.4						6.8		
Bedrock	Upgradient	G13D	Selenium, total	ug/l		Inorganic	4			5.1	6.6						2.9		
Bedrock	Upgradient	G09D	Sodium, total	mg/l	GMZ	Inorganic	164.7897	18		18		71	20		20		25	20	22
Bedrock	Upgradient	G09M	Sodium, total	mg/l	GMZ	Inorganic	164.7897	130		140		160	160		150		180	190	190
Bedrock	Upgradient	G13D	Sodium, total	mg/l	GMZ	Inorganic	164.7897	56		16		26	53		14		18	29	62
Bedrock	Upgradient	G13D	Sulfate, Dissolved	mg/l	G1	Inorganic	360	16		280	180	220	130	330	420	420	390	190	170
Bedrock	Upgradient	G13D	Sulfate, total	mg/l		Inorganic	179.3731			300	130						270		
Bedrock	Upgradient	G13S	Sulfate, total	mg/l		Inorganic	179.3731			260	240						140		
Bedrock	Upgradient	G13D	Tetrahydrofuran	ug/l	G2, GMZ	Organic	42			< 5							< 5		< 20
Bedrock	Upgradient	G13D	Vanadium, total	ug/l		Inorganic	100			120	200					12	23	< 5	7.8

Note: A highted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr07	1stQtr07re	2ndQtr07	2ndQtr07re	3rdQtr07	4thQtr07	4thQtr07re	1stQtr08	1stQtr08re	2ndQtr08	3rdQtr08	4thQtr08
Lower	Downgradient	G16M	Acetone	ug/l	G2	Organic	10			F< 10							< 10		6
Lower	Downgradient	G16M	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	3.8		2.6		2.3	2.5		1.2		0.35	< 0.09	< 0.09
Lower	Downgradient	G18D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	0.12		< 0.09		< 0.09	< 0.09		< 0.09		3	4.7	7.3
Lower	Downgradient	G34D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09		7		1	0.25		< 0.09		< 0.09	0.28	0.81
Lower	Downgradient	G35D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	0.14		68		0.62	0.29		3.9		2.2	1.8	0.97
Lower	Downgradient	G37D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09		< 0.09		< 0.09	0.15		0.97		1.1	1.4	2
Lower	Downgradient	G38S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	24		62		77	79		62		48	43	38
Lower	Compliance	G39S	Ammonia as N, dissolved	mg/l	G1	Inorganic	0.9	1.2		1.6		0.79	0.62		0.16		< 0.09	0.25	0.11
Lower	Downgradient	G41M	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	6.5		75		26	9.9		9.7		0.45	0.17	0.11
Lower	Compliance	G52M	Ammonia as N, dissolved	mg/L	G1, GMZ	Inorganic	0.9												
Lower	Compliance	R39S	Ammonia as N, dissolved	mg/L	G1, GMZ	Inorganic	0.9												
Lower	Downgradient	G38S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1		1.6		2.2	2.2		2.4		2.3	2	2.1
Lower	Compliance	G39S	Arsenic, Dissolved	ug/l	G1	Inorganic	2	2		< 1		< 1	< 1		1.2		< 1	3.6	3.5
Lower	Downgradient	G41M	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1		3.7		< 1	1.7		< 1		< 1	< 1	< 1
Lower	Compliance	R39S	Arsenic, Dissolved	ug/L	G1, GMZ	Inorganic	2												
Lower	Downgradient	G03M	Arsenic, total	ug/l	GMZ	Inorganic	10	1		< 1		3.3	< 1		< 1		< 1	1.5	< 1
Lower	Downgradient	G18D	Arsenic, total	ug/l	GMZ	Inorganic	10	2		2.5		51	4.6		1.3		1	1.5	1.6
Lower	Downgradient	G33D	Arsenic, total	ug/l	GMZ	Inorganic	10	< 1		< 1		2.5	< 1		1.5		1.7	4.8	1.4
Lower	Downgradient	G34D	Arsenic, total	ug/l	GMZ	Inorganic	10	< 1		1.2		< 1	< 1		5		< 1	7	1
Lower	Downgradient	G35D	Arsenic, total	ug/l	GMZ	Inorganic	10	< 1		1.9		< 1	< 1		7.2		1.3	11	2.8
Lower	Downgradient	G38S	Arsenic, total	ug/l	GMZ	Inorganic	10	1.1		2.2		2.1	2.8		2.4		2	2.2	2
Lower	Compliance	G39S	Arsenic, total	ug/l		Inorganic	10	2		< 1		< 1	3.9		2.1		1.9	38	36
Lower	Downgradient	G41M	Arsenic, total	ug/l	GMZ	Inorganic	10	94		12		7.1	7.3		23		2	5.9	2.8
Lower	Compliance	R39S	Arsenic, total	ug/L	GMZ	Inorganic	10												
Lower	Compliance	G39S	Biochemical Oxygen Demand	mg/l		Inorganic	4.04			4.2	< 4						< 4		
Lower	Downgradient	G18D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	47		20		< 10	21		75		160	130	120
Lower	Downgradient	G34D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	64		85		72	79		140		160	160	150
Lower	Downgradient	G35D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	25		410		34	25		38		34	32	28
Lower	Downgradient	G38S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	190		360		360	320		240		200	180	220
Lower	Compliance	G39S	Boron, Dissolved	ug/l	G1	Inorganic	98	130		110		78	63		35		42	200	360
Lower	Downgradient	G41M	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	73		540		120	180		69		36	30	70
Lower	Compliance	R39S	Boron, Dissolved	ug/L	G1, GMZ	Inorganic	98												
Lower	Downgradient	G18D	Boron, total	ug/l	GMZ	Inorganic	200	49		35		230	37		90		180	130	120
Lower	Downgradient	G35D	Boron, total	ug/l	GMZ	Inorganic	200	29		430		34	31		45		35	42	25
Lower	Downgradient	G38S	Boron, total	ug/l	GMZ	Inorganic	200	180		390		340	350		250		190	160	200
Lower	Compliance	G39S	Boron, total	ug/l		Inorganic	200	120		120		79	72		37		45	340	440
Lower	Downgradient	G41M	Boron, total	ug/l	GMZ	Inorganic	200	69		550		110	220		78		28	39	65
Lower	Compliance	R39S	Boron, total	ug/L	GMZ	Inorganic	200												
Lower	Downgradient	G36S	Carbon disulfide	ug/l	G2	Organic	5			< 1							< 1		< 1
Lower	Downgradient	G38S	Chemical Oxygen Demand	mg/l		Inorganic	50.04			51	40						38		
Lower	Downgradient	G41M	Chemical Oxygen Demand	mg/l		Inorganic	50.04			62	55						6.9		
Lower	Downgradient	G18D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	38		47		18	38		100		92	56	51
Lower	Downgradient	G34D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	120		120		140	170		130		110	74	60
Lower	Downgradient	G35D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	41		300		50	49		65		43	44	46
Lower	Downgradient	G38S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	120		300		220	54		140		110	100	130
Lower	Compliance	G39S	Chloride, Dissolved	mg/l	G1	Inorganic	87.511	110		120		57	140		270		18	140	250
Lower	Downgradient	G41M	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	48		360		57	120		45		40	39	45
Lower	Compliance	R39S	Chloride, Dissolved	mg/L	G1, GMZ	Inorganic	87.511												
Lower	Downgradient	G18D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	42		47		14	38		110		81	58	51
Lower	Downgradient	G34D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	120		120		140	170		130		110	75	64
Lower	Downgradient	G35D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	37		310		51	51		65		45	44	47
Lower	Downgradient	G38S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	110		300		230	210		130		96	99	140
Lower	Compliance	G39S	Chloride, total	mg/l		Inorganic	87.51186	100		110		82	100		260		16	210	230
Lower	Downgradient	G41M	Chloride, total	mg/l	GMZ	Inorganic	87.51186	54		360		64	120		45		40	39	42
Lower	Compliance	R39S	Chloride, total	mg/L	GMZ	Inorganic	87.51186												

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Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr07	1stQtr07re	2ndQtr07	2ndQtr07re	3rdQtr07	4thQtr07	4thQtr07re	1stQtr08	1stQtr08re	2ndQtr08	3rdQtr08	4thQtr08
Lower	Downgradient	G35D	Chromium, dissolved	ug/L	G1		72											< 4	< 4
Lower	Compliance	R39S	Lead, Dissolved	ug/L	G1	Inorganic	4												
Lower	Compliance	R39S	Magnesium, dissolved	mg/L	G1		170.41												
Lower	Downgradient	G03M	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	H 13		12		13	14		13		12	10	9.2
Lower	Downgradient	G16M	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	H 11		13		10	12		11		7.1	10	11
Lower	Downgradient	G33D	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	9.6		11		10	9.9		9		9	9	10
Lower	Downgradient	G35D	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	H 12		0.52		9.2	12		4.8		12	9.5	8.6
Lower	Downgradient	G36S	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	H 12		13		12	14		13		12	12	12
Lower	Downgradient	G03M	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	H 12		11		12	13		12		12	10	9.5
Lower	Downgradient	G16M	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	H 11		13		10	12		11		7.4	10	11
Lower	Downgradient	G33D	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	9.7		10		10	9.9		9		9.3	9	10
Lower	Downgradient	G35D	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	H 11		H 0.48		9.1	12		4.8		12	9.7	8.8
Lower	Downgradient	G36S	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	H 13		13		12	14		13		12	12	12
Lower	Downgradient	G03M	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.35		7.78		8.3	7.46		7.83		6.93	7.14	7.72
Lower	Downgradient	G16M	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.49		7.45		7.65	7.05		7.71		6.69	7.5	7.58
Lower	Downgradient	G18D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.47		7.42		7.99	7.28		7.85		8.38	7.24	7.57
Lower	Downgradient	G33D	pH (field)	units	G1	Inorganic	5.4 - 8.1	8.08		8.27		8.38	7.34		6.97		6.77	7.56	7.81
Lower	Downgradient	G35D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.53		7.4		7.4	7.05	6.72	7.48		6.68	7.24	7.59
Lower	Downgradient	G36S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.29		7.43		8.12	7.62		7.19		6.88	6.76	7.69
Lower	Downgradient	G37D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.42		7.33		8.26	7.52		6.85		6.73	7.52	7.74
Lower	Downgradient	G41M	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.53		7.17		8.19	7.22		7.61		7.31	7.21	7.82
Lower	Downgradient	G35D	Potassium, total	mg/l	GMZ	Inorganic	29.00582	2.7		30		2.8	2.6		6.5		5.4	5.8	3.9
Lower	Downgradient	G38S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	15		32		30	30		26		24	21	23
Lower	Downgradient	G41M	Potassium, total	mg/l	GMZ	Inorganic	29.00582	5.7		32		16	14		9.2		3.7	3.8	4.2
Lower	Compliance	R39S	Potassium, total	mg/L	GMZ	Inorganic	29.00582												
Lower	Downgradient	G35D	Selenium, total	ug/l		Inorganic	4			6.1	1.3						< 1		
Lower	Downgradient	G38S	Selenium, total	ug/l		Inorganic	4			5	5.8						< 1		
Lower	Downgradient	G41M	Selenium, total	ug/l		Inorganic	4			5.6	5.3						< 1		

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Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr07	1stQtr07re	2ndQtr07	2ndQtr07re	3rdQtr07	4thQtr07	4thQtr07re	1stQtr08	1stQtr08re	2ndQtr08	3rdQtr08	4thQtr08
Upper	Downgradient	G15S	1,4-Dichlorobenzene	ug/l	G2	Organic	5			8							9		
Upper	Downgradient	G51S	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5												
Upper	Downgradient	G15S	Acetone	ug/l	G2	Organic	10			13	< 10						< 10		
Upper	Downgradient	G51S	Acetone	ug/l	G2	Organic	10												
Upper	Downgradient	R03S	Acrylonitrile	ug/l	G2	Organic	10			14	< 10						< 5		< 5
Upper	Downgradient	G15S	Alkalinity, bicarbonate total	mg/l		Inorganic	960			600							1200		
Upper	Downgradient	G15S	Ammonia as N, dissolved	mg/l	G1	Inorganic	0.9	100		80		140	260		340		240		
Upper	Downgradient	G34S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	8		8.7		14	17		26		11	9.2	11
Upper	Downgradient	G35S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	10		16		5.4	6		6.2		3	3.8	4.2
Upper	Downgradient	G37S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09		10		1	0.14		< 0.09		< 0.09	< 0.09	< 0.09
Upper	Downgradient	G40S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	45		23		18	19		26		15	23	24
Upper	Downgradient	G41S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	28		35		30	30		20		7.8	1.3	18
Upper	Downgradient	G51S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9												
Upper	Downgradient	R03S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	7.6		9.6		5.3	4.9		4.1		2.4	1.3	0.9
Upper	Downgradient	R42S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	2.1		2.3		2.4	1.4		2.1		2.1	2.2	1.4
Upper	Downgradient	G15S	Arsenic, Dissolved	ug/l	G1	Inorganic	2	6		2.5		4.5	9.5		8.6		11		
Upper	Downgradient	G18S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1		2.4		< 1	< 1		< 1		< 1	< 1	< 1
Upper	Downgradient	G40S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	2		< 1		< 1	< 1		< 1		< 1	1.1	1.7
Upper	Downgradient	G41S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	35		36		38	37		27		32	31	26
Upper	Downgradient	G51S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2												
Upper	Compliance	G52S	Arsenic, Dissolved	ug/L	G1, GMZ	Inorganic	2												
Upper	Downgradient	R03S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	10		9.1		2.7	2.1		1.1		< 1	< 1	< 1
Upper	Downgradient	R42S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	31		29		42	21		30		50	57	38
Upper	Downgradient	G15S	Arsenic, total	ug/l		Inorganic	10	11		3		17			12		15		
Upper	Downgradient	G18S	Arsenic, total	ug/l	GMZ	Inorganic	10	15		11		2.2	59		63		25	31	69
Upper	Downgradient	G41S	Arsenic, total	ug/l	GMZ	Inorganic	10	40		40		42	46		33		33	120	28
Upper	Downgradient	G50S	Arsenic, total	ug/l	GMZ	Inorganic	10												
Upper	Downgradient	G51S	Arsenic, total	ug/l	GMZ	Inorganic	10												
Upper	Compliance	G52S	Arsenic, total	ug/L	GMZ	Inorganic	10												
Upper	Compliance	G54S	Arsenic, total	ug/L	GMZ	Inorganic	10												
Upper	Downgradient	R03S	Arsenic, total	ug/l	GMZ	Inorganic	10	28		9.2		42	8.5		6.7		1.2	3.3	1.8
Upper	Downgradient	R42S	Arsenic, total	ug/l	GMZ	Inorganic	10	70		46		53	38		37		58	58	40
Upper	Downgradient	G15S	Biochemical Oxygen Demand	mg/l		Inorganic	4.04			< 4							8		
Upper	Downgradient	G15S	Boron, Dissolved	ug/l	G1	Inorganic	98	660		400		710	1300		1400		1300		
Upper	Downgradient	G18S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	83		74		26	110		62		56	94	100
Upper	Downgradient	G34S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	140		76		120	170		160		97	72	78
Upper	Downgradient	G37S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	160		66		40	16		12		26	35	36
Upper	Downgradient	G40S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	220		97		86	80		100		98	140	180
Upper	Downgradient	G41S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	360		280		260	270		83		77	65	130
Upper	Downgradient	G50S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98												
Upper	Downgradient	G51S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98												
Upper	Downgradient	R42S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	84		62		86	58		78		68	84	88
Upper	Downgradient	G15S	Boron, total	ug/l		Inorganic	200	660		400		690			1700		1400		
Upper	Downgradient	G18S	Boron, total	ug/l	GMZ	Inorganic	200	92		120		34	250		220		100	200	360
Upper	Downgradient	G34S	Boron, total	ug/l	GMZ	Inorganic	200	150		90		120			220		91	78	71
Upper	Downgradient	G40S	Boron, total	ug/l	GMZ	Inorganic	200	220		95		92	83		100		88	150	160
Upper	Downgradient	G41S	Boron, total	ug/l	GMZ	Inorganic	200	360		310		240	280		95		65	70	130
Upper	Downgradient	G50S	Boron, total	ug/l	GMZ	Inorganic	200												
Upper	Downgradient	G51S	Boron, total	ug/l	GMZ	Inorganic	200												
Upper	Compliance	G52S	Boron, total	ug/L	GMZ	Inorganic	200												
Upper	Downgradient	G17S	Carbon disulfide	ug/l	G2	Organic	5			< 1							< 1		9
Upper	Downgradient	G15S	Chemical Oxygen Demand	mg/l		Inorganic	50.04			27							310		
Upper	Downgradient	G15S	Chloride, Dissolved	mg/l	G1	Inorganic	87.511	430		320		520	890		1100		860		
Upper	Downgradient	G18S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	30		62		45	27		17		19	7.6	16
Upper	Downgradient	G34S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	100		44		140	160		91		54	42	53
Upper	Downgradient	G37S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	94		40		34	37		46		42	46	55
Upper	Downgradient	G40S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	160		75		74	82		110		120	270	89
Upper	Downgradient	G41S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	110		120		98	130		60		55	50	78
Upper	Downgradient	G50S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511												
Upper	Downgradient	G51S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511												
Upper	Downgradient	R03S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	77		90		57	84		55		50	45	52
Upper	Downgradient	R42S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	58		45		70	70		67		68	100	83

Note: A highted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr07	1stQtr07re	2ndQtr07	2ndQtr07re	3rdQtr07	4thQtr07	4thQtr07re	1stQtr08	1stQtr08re	2ndQtr08	3rdQtr08	4thQtr08
Upper	Downgradient	G15S	Chloride, total	mg/l		Inorganic	87.51186	470		320		540			1100		840		
Upper	Downgradient	G18S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	24		57		47	30		14		19	11	23
Upper	Downgradient	G34S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	110		58		140	150		95		55	42	54
Upper	Downgradient	G37S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	92		39		33	37		45		43	46	55
Upper	Downgradient	G40S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	160		77		50	60		96		190	220	250
Upper	Downgradient	G41S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	110		120		97	130		60		57	50	78
Upper	Downgradient	G50S	Chloride, total	mg/l	GMZ	Inorganic	87.51186												
Upper	Downgradient	G51S	Chloride, total	mg/l	GMZ	Inorganic	87.51186												
Upper	Downgradient	R03S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	74		90		59	82		58		46	48	51
Upper	Downgradient	R42S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	58		45		70	61		66		72	100	98
Upper	Downgradient	G18S	Cobalt, total	ug/l		Inorganic	50			16							72		
Upper	Downgradient	R42S	Iron, Dissolved	ug/l		Inorganic	12189.61	54000	53000	49000	53000	48000	28000	11000	47000	45000	46000		
Upper	Downgradient	G51S	Lead, Dissolved	ug/l	G1	Inorganic	4												
Upper	Compliance	G52S	Lead, Dissolved	ug/L	G1	Inorganic	4												
Upper	Downgradient	G51S	Magnesium, dissolved	mg/l	G1		170.41												
Upper	Compliance	G52S	Magnesium, dissolved	mg/L	G1		170.41												
Upper	Downgradient	G18S	Magnesium, total	mg/l		Inorganic	109.5			67							210		
Upper	Downgradient	G40S	Magnesium, total	mg/l		Inorganic	109.5			62							130		
Upper	Downgradient	R42S	Manganese, Dissolved	ug/l		Inorganic	1479.53	1200		1100		1600	650		900		1400		
Upper	Downgradient	G119	Nitrate as N, dissolved	mg/l	G1	Inorganic	11.74	H 13											
Upper	Downgradient	G130	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	11		12		12	13		12		12	11	12
Upper	Downgradient	G40S	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	H 6.8		H 12		H 2.9	1.1		1.5		H 18	H 1.7	0.63
Upper	Downgradient	G119	Nitrate as N, total	mg/l		Inorganic	11.7389	H 14											
Upper	Downgradient	G130	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	11		11		12	13		12		12	12	13
Upper	Downgradient	G33S	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	8.8		8.2		10	9.5		10		9.2	8.6	7.9
Upper	Downgradient	G40S	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	H 7.2		H 12		H 4.7	H 2.3		H 3		2	H 2.4	1.7
Upper	Downgradient	G130	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.2		7.24		8.05	7.45		7.19		7.43	6.8	7.79
Upper	Downgradient	G18S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.29		7.79		7.33	7.04		7.48		8.14	6.91	7.46
Upper	Downgradient	G33S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.6		7.73		8.39	7.27		6.88		6.75	7.94	8.11
Upper	Downgradient	G34S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.21	6.99	7.41		7.61	6.98		7.53		6.41	7.04	7.52
Upper	Downgradient	G35S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.18		7.48		7.64	7.01		7.69		6.7	7.39	7.75
Upper	Downgradient	G37S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.06		7.27		8.18	7.55		6.99		7.09	7.66	7.82
Upper	Downgradient	G40S	pH (field)	units	G1	Inorganic	5.4 - 8.1	6.69		7.1		7.75	6.96	6.6	7.5	6.86	8.14	6.71	7.35
Upper	Compliance	G52S	pH (field)	units	G1	Inorganic	5.4 - 8.1												
Upper	Downgradient	G40S	Polychlorinated Biphenyls(PCBs)	ug/l		Organic	2.5			< 0.5							2.8		
Upper	Downgradient	G15S	Potassium, total	mg/l		Inorganic	29.00582	59		44		71			150		130		
Upper	Downgradient	G18S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	12		12		4.1	25		37		12	18	33
Upper	Downgradient	G40S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	30		20		17	17		21		38	23	23
Upper	Downgradient	G41S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	30		30		26	27		16		10	9.3	15
Upper	Downgradient	G50S	Potassium, total	mg/l	GMZ	Inorganic	29.00582												
Upper	Downgradient	G51S	Potassium, total	mg/l	GMZ	Inorganic	29.00582												
Upper	Compliance	G52S	Potassium, total	mg/L	GMZ	Inorganic	29.00582												
Upper	Downgradient	G15S	Selenium, total	ug/l		Inorganic	4			4.8	6.1						14		
Upper	Downgradient	G18S	Selenium, total	ug/l		Inorganic	4			3.1							5.2		
Upper	Downgradient	G40S	Selenium, total	ug/l		Inorganic	4			2.5							20		
Upper	Downgradient	G15S	Sodium, total	mg/l		Inorganic	164.7897	180		100		250			610		480		
Upper	Downgradient	G51S	Sodium, total	mg/l	GMZ	Inorganic	164.7897												
Upper	Downgradient	G15S	Specific Conductance (field)	umhos	G1	Inorganic	3820	3000	3670	3222		1444	4100	539	4510	4560	627		
Upper	Downgradient	R42S	Sulfate, Dissolved	mg/l	G1	Inorganic	360	300		380	270	290	150	140	130	160	190	240	150
Upper	Downgradient	R42S	Sulfate, total	mg/l		Inorganic	179.3731			390	270						220		
Upper	Downgradient	G51S	Tetrahydrofuran	ug/l	G2, GMZ	Organic	42												

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr09	2ndQtr09	2ndQtr09re	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Bedrock	Upgradient	G09D	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5		11			5.4		11		12		10		1.1	
Bedrock	Upgradient	G09M	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5		< 1			2.3		1.3		5.9		4.2		6.4	
Bedrock	Upgradient	G13S	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5		< 1			< 1		< 1		3.6		12		13	
Bedrock	Upgradient	G09D	Acetone	ug/l	G2	Organic	10		< 5			11	< 5	< 5		< 5		< 5		< 5	
Bedrock	Upgradient	G13D	Acetone	ug/l	G2	Organic	10		18	< 5		< 5		13		8.6		< 5		< 5	
Bedrock	Downgradient	G16D	Acrylonitrile	ug/l	G2	Organic	10		< 5			< 5		< 5		< 5		< 5		< 5	
Bedrock	Upgradient	G13D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	15	70		32	25	15	250	200	170	280	23	13	18	15
Bedrock	Upgradient	G13S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09	0.16		0.75	0.59	1.1	0.39	1.1	1.7	11	7	6	5.6	6.3
Bedrock	Upgradient	G09D	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	1.9	5.5		3.3	2.3	1.9	1.8	2.7	3.2	1.2	4.6	4.4	3.1	3.4
Bedrock	Upgradient	G13D	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	3.8	12		6.9	9.1	< 1	43	43	19	10	2.4	< 1	2.5	1.9
Bedrock	Upgradient	G13S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	3.9	< 1		1.2	4.5	1.8	< 1	1.8	3.1	4.6	4.1	1.4	5.2	4.7
Bedrock	Upgradient	G13D	Arsenic, total	ug/l	GMZ	Inorganic	10	61	14			67	4.8	58	57	22	61	5.3	8.2	16	18
Bedrock	Upgradient	G13S	Arsenic, total	ug/l	GMZ	Inorganic	10	8.4	1.4			3.5	120	< 1	2.9	5.2	12	3.1	1.9	9.8	11
Bedrock	Upgradient	G20D	Arsenic, total	ug/l	GMZ	Inorganic	10	9.1	< 1		< 1	< 1	14	< 1	< 1	< 1	3.2	< 1	< 1	< 1	4.3
Bedrock	Upgradient	G13D	Benzene	ug/l	G2	Organic	2.8		< 1			< 1		< 1		< 1		1.7		3.7	2.7
Bedrock	Upgradient	G13S	Benzene	ug/l	G2	Organic	2.8		< 1			1.2	< 1	1.6		4.1		3.7		4.7	
Bedrock	Upgradient	G09M	Biochemical Oxygen Demand	mg/l		Inorganic	4.04														
Bedrock	Upgradient	G13D	Biochemical Oxygen Demand	mg/l		Inorganic	4.04														
Bedrock	Upgradient	G13S	Biochemical Oxygen Demand	mg/l		Inorganic	4.04														
Bedrock	Upgradient	G09D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	42	44		42	41	46	36	53	46	42	45	62	54	70
Bedrock	Upgradient	G13D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	440	1800		2700	1900	250	7100	8500	6600	5000	950	360	690	480
Bedrock	Upgradient	G13S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	160	81		100	100	150	93	200	280	440	470	470	410	250
Bedrock	Upgradient	G13D	Boron, total	ug/l	GMZ	Inorganic	200	480	2100			2000	160	7200	8500	7000	6500	1100	400	660	510
Bedrock	Upgradient	G13S	Boron, total	ug/l	GMZ	Inorganic	200	170	80			330	1100	110	230	290	430	530	470	390	260
Bedrock	Upgradient	G09D	Carbon disulfide	ug/l	G2	Organic	5		< 1			< 1		< 1		26	< 1	< 1		< 1	
Bedrock	Upgradient	G13S	Carbon disulfide	ug/l	G2	Organic	5		< 1			< 1		< 1		12	< 1	< 1		< 1	
Bedrock	Upgradient	G20D	Carbon disulfide	ug/l	G2	Organic	5		< 1			< 1		< 1		P 36		< 1		< 1	
Bedrock	Upgradient	G13D	Chemical Oxygen Demand	mg/l		Inorganic	50.04														
Bedrock	Upgradient	G13S	Chemical Oxygen Demand	mg/l		Inorganic	50.04														
Bedrock	Upgradient	G09D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	97	94		86	100	520	110	130	120	140	140	81	76	65
Bedrock	Upgradient	G09M	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	480	490		450	480	110	540	590	610	560	560	610		600
Bedrock	Upgradient	G13D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	110	260		180	190	170	830	720	530	350	200	200	220	160
Bedrock	Upgradient	G13S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	73	77		54	72	67	58	92	110	120	150	170	190	120
Bedrock	Upgradient	G09D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	70	95		90	110	490	110	130	120	130	140	100	85	79
Bedrock	Upgradient	G09M	Chloride, total	mg/l	GMZ	Inorganic	87.51186	540	520		470	610	100	580	590	620	620	630	600	640	610
Bedrock	Upgradient	G13D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	110	290		200	190	170	770	730	520	350	210	190	210	180
Bedrock	Upgradient	G13S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	75	82		55	71	70	56	98	100	120	150	170	200	120
Bedrock	Upgradient	G09D	Chlorobenzene	ug/l	G2	Organic	5		8.8	< 1		4		8.8		11		8.5		4.9	
Bedrock	Upgradient	G09M	Chlorobenzene	ug/l	G2	Organic	5		< 1			1.4	3.2	< 1		5.9	5.7	3.3		6.6	
Bedrock	Upgradient	G13D	Chlorobenzene	ug/l	G2	Organic	5		< 1			< 1		1.7		4		6.1		14	
Bedrock	Upgradient	G13S	Chlorobenzene	ug/l	G2	Organic	5		2.5	< 1		4.1	1.2	5.9		24		23		29	
Bedrock	Upgradient	G20D	cis-1,2-Dichloroethene	ug/l	G2	Organic	5	13	8.8	8		13	11	10		P 11		7.4		7.1	
Bedrock	Upgradient	G09D	Lead, Dissolved	ug/l	G1	Inorganic	4	< 1	< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	6.7	< 1	< 1	< 1
Bedrock	Upgradient	G13D	Lead, Dissolved	ug/l	G1	Inorganic	4	< 1	< 1		< 1	< 1	< 1	4	7.8	1.6	< 1	< 1	< 1	< 1	< 1
Bedrock	Upgradient	G13D	Magnesium, dissolved	mg/L	G1		170.41	150	160		110	140	33	190	160	130	120	110	110	120	110
Bedrock	Upgradient	G13D	Magnesium, total	mg/l		Inorganic	109.5														
Bedrock	Upgradient	G13D	Manganese, Dissolved	ug/l		Inorganic	1479.53														
Bedrock	Upgradient	G13S	Manganese, Dissolved	ug/l		Inorganic	1479.53														
Bedrock	Upgradient	G13S	Mercury, dissolved	ug/L	G1		0.2	< 0.2	< 0.2		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.24	< 0.2	< 0.2	< 0.2
Bedrock	Upgradient	G09M	Methylene Chloride	ug/l	G2	Organic	8		< 2.5			< 2.5		< 2.5		< 2.5		< 2		< 2	
Bedrock	Downgradient	G41D	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	9.7	12		9.5	10	8.5	8.9	9.2	9.5	9.8	10	9.6	9.3	10
Bedrock	Downgradient	G16D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.91	7.82		7.57	7.53	7.45	7.57	7.7	7.51	7.44	8.29	7.48	8.17	7.24
Bedrock	Upgradient	G20D	pH (field)	units	G1	Inorganic	5.4 - 8.1	8.03	7.25		7.99	7.9	8.03	7.9	7.23	6.91	7.4	7.98	7.46	7.38	6.97
Bedrock	Downgradient	G41D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.54	7.09		7.48	7.38	7.91	7.48	7.52	6.92	7.27	7.94	6.88	7.24	7.21
Bedrock	Upgradient	G13D	Potassium, total	mg/l	GMZ	Inorganic	29.00582	85	190			140	7.2	340	330	270	230	79	98	87	81
Bedrock	Upgradient	G13S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	6.1	5.1			7.6	79	5.7	6.8	8	20	45	19	18	21
Bedrock	Upgradient	G09M	Selenium, total	ug/l		Inorganic	4														
Bedrock	Upgradient	G13D	Selenium, total	ug/l		Inorganic	4														
Bedrock	Upgradient	G09D	Sodium, total	mg/l	GMZ	Inorganic	164.7897	35	36		45	51	220	56	70	77	81	83	61	56	50
Bedrock	Upgradient	G09M	Sodium, total	mg/l	GMZ	Inorganic	164.7897	210	210		220	200	55	240	240	250	250	260	250	240	270
Bedrock	Upgradient	G13D	Sodium, total	mg/l	GMZ	Inorganic	164.7897	72	220			160	52	730	610	500	450	92	44	65	63
Bedrock	Upgradient	G13D	Sulfate, Dissolved	mg/l	G1	Inorganic	360	570	580		70	280	310	270	360	260	190	280	300	230	170
Bedrock	Upgradient	G13D	Sulfate, total	mg/l		Inorganic	179.3731														
Bedrock	Upgradient	G13S	Sulfate, total	mg/l		Inorganic	179.3731														
Bedrock	Upgradient	G13D	Tetrahydrofuran	ug/l	G2, GMZ	Organic	42		110			< 2.5		63		24		15		< 2	
Bedrock	Upgradient	G13D	Vanadium, total	ug/l		Inorganic	100		6												

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr09	2ndQtr09	2ndQtr09re	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G16M	Acetone	ug/l	G2	Organic	10		< 5			13	< 5	< 5		< 5		< 5		< 5	
Lower	Downgradient	G16M	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09	< 0.09		< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G18D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	11	11		14	11	4	5.6	2.3	1.9	1	1			
Lower	Downgradient	G34D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	2.7	4.2		6	Q 7.1	5.6	2.9	3.1	3	5.8	2.6	2.2	1.9	1.5
Lower	Downgradient	G35D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	0.74	2.2		2.8	1.8	4.8	3.4	0.4	0.31	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G37D	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	2.1	2.1			1.7	1.7	0.99	0.48	< 0.09	0.44	0.49			
Lower	Downgradient	G38S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	16	15		16	8.6	7.8	4.5	1.2	0.22	< 0.09	0.93	0.59	0.38	< 0.1
Lower	Compliance	G39S	Ammonia as N, dissolved	mg/l	G1	Inorganic	0.9	< 0.09													
Lower	Downgradient	G41M	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09	< 0.09		< 0.09	< 0.09	< 0.09	< 0.09	2.3	3.6	2.3	1.5	1.7	0.28	0.18
Lower	Compliance	G52M	Ammonia as N, dissolved	mg/L	G1, GMZ	Inorganic	0.9					< 0.09	< 0.09	< 0.09	0.52	0.39	0.46	0.33	1.2	1	0.87
Lower	Compliance	R39S	Ammonia as N, dissolved	mg/L	G1, GMZ	Inorganic	0.9		< 0.09		5.5	21	25	42	40	27	3	15	12		
Lower	Downgradient	G38S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	1.5	2		1.9	2.4	1.2	1.2	< 1	1.2	< 1	< 1	< 1	< 1	< 1
Lower	Compliance	G39S	Arsenic, Dissolved	ug/l	G1	Inorganic	2	2.2													
Lower	Downgradient	G41M	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1	< 1		< 1	< 1	< 1	< 1	< 1	1.2	< 1	< 1	< 1	< 1	< 1
Lower	Compliance	R39S	Arsenic, Dissolved	ug/L	G1, GMZ	Inorganic	2		2.6		4.6	2.2	3.6	2	1.9	2	1.4	< 1	< 1		
Lower	Downgradient	G03M	Arsenic, total	ug/l	GMZ	Inorganic	10	5.7	< 1		< 1	< 1	1.2	1.5	1.5	< 1	6.8	< 1	< 1	1.6	14
Lower	Downgradient	G18D	Arsenic, total	ug/l	GMZ	Inorganic	10	7.8	4.6		1.8	2.4	< 1	9.5	1.5	2.8	24	4.2			
Lower	Downgradient	G33D	Arsenic, total	ug/l	GMZ	Inorganic	10	5.5	5.2		3.2	< 1	2	3.1	1.5		19	11	1.5	1.2	21
Lower	Downgradient	G34D	Arsenic, total	ug/l	GMZ	Inorganic	10	15	5.2		< 1	< 1	2	1.1	< 1	< 1	2.5	< 1	< 1	< 1	3.7
Lower	Downgradient	G35D	Arsenic, total	ug/l	GMZ	Inorganic	10	160	43		32	1.3	26	12	12	5	2.1	13	2.2	2.6	21
Lower	Downgradient	G38S	Arsenic, total	ug/l	GMZ	Inorganic	10	4.8	2.1		5.2	2.6	5.9	2.1	1	1.2	12	4.3	2.7	16	14
Lower	Compliance	G39S	Arsenic, total	ug/l		Inorganic	10	79													
Lower	Downgradient	G41M	Arsenic, total	ug/l	GMZ	Inorganic	10	18	5.5		9.8	22	31	12	14	2.5	9.7	6.7	11	1.9	1.1
Lower	Compliance	R39S	Arsenic, total	ug/L	GMZ	Inorganic	10		3.5		11	5.2	54	130	98	2.3	5	1.4	1.9		
Lower	Compliance	G39S	Biochemical Oxygen Demand	mg/l		Inorganic	4.04														
Lower	Downgradient	G18D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	100	89		85	62	56	31	33	32	28	21			
Lower	Downgradient	G34D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	110	97		84	62	52	36	29	24	27	34	36	24	31
Lower	Downgradient	G35D	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	29	42		33	34	40	17	37	28	32	< 10	22	16	< 10
Lower	Downgradient	G38S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	130	130		120	120	100	85	100	82	33	45	110	410	25
Lower	Compliance	G39S	Boron, Dissolved	ug/l	G1	Inorganic	98	320													
Lower	Downgradient	G41M	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	22	26		29	18	23	27	48	65	67	30	35	23	25
Lower	Compliance	R39S	Boron, Dissolved	ug/L	G1, GMZ	Inorganic	98		380		420	350	360	340	220	130	77	68	71		
Lower	Downgradient	G18D	Boron, total	ug/l	GMZ	Inorganic	200	130	93		78	67	52	60	36	36	99	42			
Lower	Downgradient	G35D	Boron, total	ug/l	GMZ	Inorganic	200	180	85		52	34	52	40	34	26	26	19	21	23	32
Lower	Downgradient	G38S	Boron, total	ug/l	GMZ	Inorganic	200	140	120		130	120	100	87	97	71	48	60	100	72	30
Lower	Compliance	G39S	Boron, total	ug/l		Inorganic	200	470													
Lower	Downgradient	G41M	Boron, total	ug/l	GMZ	Inorganic	200	19	20		27	18	22	34	45	66	66	35	26	23	27
Lower	Compliance	R39S	Boron, total	ug/L	GMZ	Inorganic	200		360		400	360	480	610	500	110	74	67	58		
Lower	Downgradient	G36S	Carbon disulfide	ug/l	G2	Organic	5		< 1			< 1		< 1		5.8	< 1	< 1		< 1	
Lower	Downgradient	G38S	Chemical Oxygen Demand	mg/l		Inorganic	50.04														
Lower	Downgradient	G41M	Chemical Oxygen Demand	mg/l		Inorganic	50.04														
Lower	Downgradient	G18D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	53	53		52	38	52	41	27	28	27	38			
Lower	Downgradient	G34D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	53	54		51	46	44	40	30	24	25	29	28	3.1	26
Lower	Downgradient	G35D	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	56	62		44	47	36	33	26	28	26	38	27	25	27
Lower	Downgradient	G38S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	65	64		76	65	95	180	29	32	40	140	66	39	36
Lower	Compliance	G39S	Chloride, Dissolved	mg/l	G1	Inorganic	87.511	260													
Lower	Downgradient	G41M	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	43	42		39	37	40	62	41	57	51	44	45	39	40
Lower	Compliance	R39S	Chloride, Dissolved	mg/L	G1, GMZ	Inorganic	87.511		< 1		250	160	160	130	59	60	48	130	48		
Lower	Downgradient	G18D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	54	61		52	37	50	40	30	27	30	37			
Lower	Downgradient	G34D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	56	58		51	46	45	44	32	25	25	29	27	28	27
Lower	Downgradient	G35D	Chloride, total	mg/l	GMZ	Inorganic	87.51186	58	62		45	52	36	34	27	29	26	38	31	26	29
Lower	Downgradient	G38S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	65	59		75	68	80	180	45	32	34	160	73	39	46
Lower	Compliance	G39S	Chloride, total	mg/l		Inorganic	87.51186	260													
Lower	Downgradient	G41M	Chloride, total	mg/l	GMZ	Inorganic	87.51186	51	42		39	38	42	65	43	52	51	43	44	40	38
Lower	Compliance	R39S	Chloride, total	mg/L	GMZ	Inorganic	87.51186		< 1		240	160	170	120	64	55	47	44	46		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr09	2ndQtr09	2ndQtr09re	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G35D	Chromium, dissolved	ug/L	G1		72	< 4	< 4		< 4	< 4	< 4	< 4	< 4	< 4	76	< 4	< 4	< 4	< 4
Lower	Compliance	R39S	Lead, Dissolved	ug/L	G1	Inorganic	4		< 1		< 1	< 1	< 1	< 1	30	< 1	< 1	< 1	< 1		
Lower	Compliance	R39S	Magnesium, dissolved	mg/L	G1		170.41		78		89	62	69	59	180	39	44	40	39		
Lower	Downgradient	G03M	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	12	9.6		8.2	7.8	8.2	7.8	7.7	H 7.1	8.3	9.3	8.8		10
Lower	Downgradient	G16M	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	6.3	7.8		9.9	9.9	6.1	10	10	9.6	6.9	2.5	4.4	3.9	4.5
Lower	Downgradient	G33D	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	11	12		H 12	12	10	11	12		10	11	11	8	8.7
Lower	Downgradient	G35D	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	8.3	7.6		H 8.4	5	5.9	5.7	7.3	5	6.3	5.3	8.7	5.9	7.5
Lower	Downgradient	G36S	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	13	12		H 13	11	13	12	11	11	12	12	11	12	11
Lower	Downgradient	G03M	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	11	9.9		7.5	8.2	8	7.9	8.1	7.7	7.8	9	9.1	10	10
Lower	Downgradient	G16M	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	6.4	8.9		10	10	6.4	11	10	8.7	7.1	2.3	4.5	3.9	4.4
Lower	Downgradient	G33D	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	11	12		H 12	12	13	11	12		10	11	11	8	8.2
Lower	Downgradient	G35D	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	8.7	7.7		H 8.5	5.1	5.8	5.9	7.6	5.2	6.3	5.2	6.6	7.2	7.1
Lower	Downgradient	G36S	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	13	13		H 13	12	12	12	12	12	12	12	11	12	11
Lower	Downgradient	G03M	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.84	7.32		7.51	7.53	7.89	7.42	7.63	7.43	7.14	7.81	6.94	7.88	6.57
Lower	Downgradient	G16M	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.4	7.62		7.55	7.5	7.26	7.5	7.57	7.52	7.4	8.22	7.41	7.9	7.76
Lower	Downgradient	G18D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.47	7.04		7	7.32	7.7	7.33	6.73	7.38	7.17	7.67			
Lower	Downgradient	G33D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.97	8.18		7.58	7.52	7.12	7.61	7.76		7.14	7.78	7.09	8.48	8.16
Lower	Downgradient	G35D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.53	7.81		7.46	7.23	6.74	7.36	7.52	7.31	6.27	7.99	7.25	7.95	8.37
Lower	Downgradient	G36S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.62	7.6		7.73	7.48	7.72	7.47	7.73	7.06	6.98	7.48	7.57	6.92	8.21
Lower	Downgradient	G37D	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.69	7.6		7.6	7.52	7.73	7.64	6.58	7.42	7.21	7.92		7.92	
Lower	Downgradient	G41M	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.35	7.15		7.5	7.52	7.88	7.6	7.96	6.44	7.18	7.53	7	7.43	7.2
Lower	Downgradient	G35D	Potassium, total	mg/l	GMZ	Inorganic	29.00582	28	12		10	4.4	8.2	7.6	5.4	4	3	3.7	1.7	1.7	6.3
Lower	Downgradient	G38S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	16	14		16	12	12	10	8.2	6.9	5.4	6.6	6.4	6	3.2
Lower	Downgradient	G41M	Potassium, total	mg/l	GMZ	Inorganic	29.00582	3.9	3.4		3.2	2.9	2.7	2.9	5.8	5.9	6	3.1	3.3	2.2	2.1
Lower	Compliance	R39S	Potassium, total	mg/L	GMZ	Inorganic	29.00582		3		7.3	10	23	73	63	19	16	14	12		
Lower	Downgradient	G35D	Selenium, total	ug/l		Inorganic	4														
Lower	Downgradient	G38S	Selenium, total	ug/l		Inorganic	4														
Lower	Downgradient	G41M	Selenium, total	ug/l		Inorganic	4														

Note: A highted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr09	2ndQtr09	2ndQtr09re	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G15S	1,4-Dichlorobenzene	ug/l	G2	Organic	5														
Upper	Downgradient	G51S	1,4-Dichlorobenzene	ug/l	G2, GMZ	Organic	5		3.1			< 1		2.4		6.2		6.6			
Upper	Downgradient	G15S	Acetone	ug/l	G2	Organic	10														
Upper	Downgradient	G51S	Acetone	ug/l	G2	Organic	10		11	< 5		< 5		< 5		5.2	< 5	< 5			
Upper	Downgradient	R03S	Acrylonitrile	ug/l	G2	Organic	10		< 5			< 5		< 5		< 5		< 5		< 5	
Upper	Downgradient	G15S	Alkalinity, bicarbonate total	mg/l		Inorganic	960														
Upper	Downgradient	G15S	Ammonia as N, dissolved	mg/l	G1	Inorganic	0.9														
Upper	Downgradient	G34S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	10	10		6.6	4.8	5.6	3.5	1.4	0.81	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G35S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	3.4	1.2		2	1.9	1.6	1.1	1	0.86	0.64	0.36	0.22	0.33	< 0.1
Upper	Downgradient	G37S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	< 0.09	< 0.09			< 0.09	< 0.09	< 0.09	0.34	0.34	0.38	< 0.1			
Upper	Downgradient	G40S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	19	14		24	11	9.4	9							
Upper	Downgradient	G41S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	4.9	2.5		1.2	1.6	1	0.64	0.37	0.32	2.4	1.4	0.23	< 0.1	0.37
Upper	Downgradient	G51S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	8	9.2		9.8	5.7	12	16	45	76	100	39	160		
Upper	Downgradient	R03S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	1.2	R 1.2		1.1	0.9	1.2	1.3	0.93	0.84	0.66	0.45	0.4	0.22	< 0.1
Upper	Downgradient	R42S	Ammonia as N, dissolved	mg/l	G1, GMZ	Inorganic	0.9	1.7	2		2	1.7	1.7	1.6	1.4	0.53	0.57	2.3	1.2	2.1	0.44
Upper	Downgradient	G15S	Arsenic, Dissolved	ug/l	G1	Inorganic	2														
Upper	Downgradient	G18S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1	< 1		< 1	< 1	< 1								
Upper	Downgradient	G40S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	1.6	2.3		2.9	1.7	1.4	1.5							
Upper	Downgradient	G41S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	25	25		23	19	17	16	13	16	13	8.4	6.4	< 1	< 1
Upper	Downgradient	G51S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1	2.1		1.8	1.8	3.5	3.2	6.4	6.8	8.6	12	12		
Upper	Compliance	G52S	Arsenic, Dissolved	ug/L	G1, GMZ	Inorganic	2					1.1	< 1	3.4	1.2	1.1	< 1	< 1	2	3	< 1
Upper	Downgradient	R03S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	< 1	< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	R42S	Arsenic, Dissolved	ug/l	G1, GMZ	Inorganic	2	27	52		52	40	28	36	31	12	7.5	40	30	42	8.2
Upper	Downgradient	G15S	Arsenic, total	ug/l		Inorganic	10														
Upper	Downgradient	G18S	Arsenic, total	ug/l	GMZ	Inorganic	10	140	34		52	110	8.9								
Upper	Downgradient	G41S	Arsenic, total	ug/l	GMZ	Inorganic	10	29	60		56	78	31	20	40	66	20	9.6	8.2	3.4	12
Upper	Downgradient	G50S	Arsenic, total	ug/l	GMZ	Inorganic	10	720	96		180	76	210								
Upper	Downgradient	G51S	Arsenic, total	ug/l	GMZ	Inorganic	10	36	3.5		68	30	64	28	120	56	46	21	65		
Upper	Compliance	G52S	Arsenic, total	ug/L	GMZ	Inorganic	10					1.9	29	74	40	36	45	29	29	2	32
Upper	Compliance	G54S	Arsenic, total	ug/L	GMZ	Inorganic	10														18
Upper	Downgradient	R03S	Arsenic, total	ug/l	GMZ	Inorganic	10	4.6	< 1		< 1	< 1	2.3	18	3.4	< 1	5.6	< 1	2	1	6.5
Upper	Downgradient	R42S	Arsenic, total	ug/l	GMZ	Inorganic	10	31	51		50	48	36	40	42	14	6.7	36	31	38	13
Upper	Downgradient	G15S	Biochemical Oxygen Demand	mg/l		Inorganic	4.04														
Upper	Downgradient	G15S	Boron, Dissolved	ug/l	G1	Inorganic	98														
Upper	Downgradient	G18S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	68	58		92	110	59								
Upper	Downgradient	G34S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	60	63		44	46	44	22	37	32	11	19	38	18	15
Upper	Downgradient	G37S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	20	27			40	28	25	72	40	31	27			
Upper	Downgradient	G40S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	140	150		340	150	180	220							
Upper	Downgradient	G41S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	60	78		100	42	40	30	34	40	69	25	39	20	43
Upper	Downgradient	G50S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	140	42		45	53	48								
Upper	Downgradient	G51S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	96	74		75	77	91	110	220	310	410	480	520		
Upper	Downgradient	R42S	Boron, Dissolved	ug/l	G1, GMZ	Inorganic	98	77	80		83	78	79	68	94	52	62	80	72	99	56
Upper	Downgradient	G15S	Boron, total	ug/l		Inorganic	200														
Upper	Downgradient	G18S	Boron, total	ug/l	GMZ	Inorganic	200	580	130		220	490	86								
Upper	Downgradient	G34S	Boron, total	ug/l	GMZ	Inorganic	200	65	62		40	43	41	36	43	30	14	20	38	27	16
Upper	Downgradient	G40S	Boron, total	ug/l	GMZ	Inorganic	200	160	140		360	150	180	220							
Upper	Downgradient	G41S	Boron, total	ug/l	GMZ	Inorganic	200	57	66		96	39	40	36	31	38	66	29	27	28	38
Upper	Downgradient	G50S	Boron, total	ug/l	GMZ	Inorganic	200	610	100		180	130	320								
Upper	Downgradient	G51S	Boron, total	ug/l	GMZ	Inorganic	200	130	67		120	110	160	150	260	330	450	440	500		
Upper	Compliance	G52S	Boron, total	ug/L	GMZ	Inorganic	200					34	200	250	260	220	290	210	150	71	160
Upper	Downgradient	G17S	Carbon disulfide	ug/l	G2	Organic	5	< 1	< 1			< 1									
Upper	Downgradient	G15S	Chemical Oxygen Demand	mg/l		Inorganic	50.04														
Upper	Downgradient	G15S	Chloride, Dissolved	mg/l	G1	Inorganic	87.511														
Upper	Downgradient	G18S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	48	70		26	35	110								
Upper	Downgradient	G34S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	35	36		34	40	35	29	41	29	33	35	28	23	27
Upper	Downgradient	G37S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	49	54			57	50	47	36	32	36	33			
Upper	Downgradient	G40S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	290	260		290	210	200	190							
Upper	Downgradient	G41S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	100	74		70	42	42	52	55	44	59	39	37	28	50
Upper	Downgradient	G50S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	120	35		36	42	35								
Upper	Downgradient	G51S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	86	140		190	280	270	480	820	740	790	1000	4.4		
Upper	Downgradient	R03S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	53	49		48	41	45	40	45	42	40	43	43		42
Upper	Downgradient	R42S	Chloride, Dissolved	mg/l	G1, GMZ	Inorganic	87.511	110	82		50	63	33	26	96	63	63	140	100	110	67

Note: A highted cell indicates an exceedence of the AGQS value.

Table 3
Winnebago Landfill
Northern Unit AGQS Exceedences

Zone	Location	Well ID	Parameter	Units	GW List	Type	AGQS	1stQtr09	2ndQtr09	2ndQtr09re	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G15S	Chloride, total	mg/l		Inorganic	87.51186														
Upper	Downgradient	G18S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	48	70		26	33	110								
Upper	Downgradient	G34S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	34	38		35	40	35	31	38	30	33	35	29	34	27
Upper	Downgradient	G37S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	49	56			60	51	47	36	32	35	33			
Upper	Downgradient	G40S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	270	260		300	210	180	180							
Upper	Downgradient	G41S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	91	72		68	45	45	54	53	43	59	39	39	31	32
Upper	Downgradient	G50S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	140	38		32	33	36								
Upper	Downgradient	G51S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	76	140		200	280	260	470	830	610	900	1000	1200		
Upper	Downgradient	R03S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	60	50		56	44	41	39	45	39	39	40	44	42	38
Upper	Downgradient	R42S	Chloride, total	mg/l	GMZ	Inorganic	87.51186	110	79		47	63	28	28	120	70	70	140	160	140	92
Upper	Downgradient	G18S	Cobalt, total	ug/l		Inorganic	50														
Upper	Downgradient	R42S	Iron, Dissolved	ug/l		Inorganic	12189.61														
Upper	Downgradient	G51S	Lead, Dissolved	ug/l	G1	Inorganic	4	< 1	< 1		< 1	< 1	< 1	< 1	27	< 1	< 1	< 1	< 1		
Upper	Compliance	G52S	Lead, Dissolved	ug/L	G1	Inorganic	4					< 1	< 1	53	3	1.2	< 1	< 1	24	17	< 1
Upper	Downgradient	G51S	Magnesium, dissolved	mg/l	G1		170.41	51	56		66	76	92	100	230	100	110	120	120		
Upper	Compliance	G52S	Magnesium, dissolved	mg/L	G1		170.41					51	52	260	61	48	53	44	110	200	42
Upper	Downgradient	G18S	Magnesium, total	mg/l		Inorganic	109.5														
Upper	Downgradient	G40S	Magnesium, total	mg/l		Inorganic	109.5														
Upper	Downgradient	R42S	Manganese, Dissolved	ug/l		Inorganic	1479.53														
Upper	Downgradient	G119	Nitrate as N, dissolved	mg/l	G1	Inorganic	11.74														
Upper	Downgradient	G130	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	13	12		H 13	12	12	12	12	12	12	12	12	13	11
Upper	Downgradient	G40S	Nitrate as N, dissolved	mg/l	G1, GMZ	Inorganic	11.74	0.047	< 0.02		< 0.02	< 0.02	< 0.02	H 2							
Upper	Downgradient	G119	Nitrate as N, total	mg/l		Inorganic	11.7389														
Upper	Downgradient	G130	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	13	13		H 13	12	13	12	12	12	12	12	12	11	11
Upper	Downgradient	G33S	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	10	9.9		H 11	11	12	11	10		5.9	5.4	4.6	5.3	7.6
Upper	Downgradient	G40S	Nitrate as N, total	mg/l	GMZ	Inorganic	11.7389	0.55	< 0.02		0.11	< 0.02	3.4	1.3							
Upper	Downgradient	G130	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.62	7.72		7.69	7.52	7.87	7.54	7.75	6.72	7.01	7.63	7.46	7.24	8.25
Upper	Downgradient	G18S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.36	7.6		7.36	7.2	7.6								
Upper	Downgradient	G33S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.85	8.08		7.8	7.41	7.26	7.66	7.84		7.2	7.96	7.4	8.16	9
Upper	Downgradient	G34S	pH (field)	units	G1	Inorganic	5.4 - 8.1	6.8	7.77		7.63	7.4	6.73	7.35	7.56	7.3	7.2	8.02	7.38	8.29	7.86
Upper	Downgradient	G35S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.25	8.02		7.61	7.19	6.91	7.28	7.57	7.21	7.28	7.81	7.11	7.97	8.99
Upper	Downgradient	G37S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.69	7.81		7.81	7.66	7.85	7.69	7.43	7.16	7.25	8.05		8.05	
Upper	Downgradient	G40S	pH (field)	units	G1	Inorganic	5.4 - 8.1	7.16	6.97		6.93	6.82	7.81	7.37							
Upper	Compliance	G52S	pH (field)	units	G1	Inorganic	5.4 - 8.1					7.91	7.19	7.42	7.67	6.56	7.22	7.63	6.9	8.41	7.06
Upper	Downgradient	G40S	Polychlorinated Biphenyls(PCBs)	ug/l		Organic	2.5														
Upper	Downgradient	G15S	Potassium, total	mg/l		Inorganic	29.00582														
Upper	Downgradient	G18S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	63	17		24	77	12								
Upper	Downgradient	G40S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	21	20		23	16	14	14							
Upper	Downgradient	G41S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	7.5	5.8		5.7	6.2	5.2	4.4	4	4.9	7.9	5.1	4.6	3.4	4.5
Upper	Downgradient	G50S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	75	13		22	19	50								
Upper	Downgradient	G51S	Potassium, total	mg/l	GMZ	Inorganic	29.00582	13	15		20	20	24	21	31	30	39	39	46		
Upper	Compliance	G52S	Potassium, total	mg/L	GMZ	Inorganic	29.00582					3.6	22	25	41	36	55	35	14	3.7	24
Upper	Downgradient	G15S	Selenium, total	ug/l		Inorganic	4														
Upper	Downgradient	G18S	Selenium, total	ug/l		Inorganic	4														
Upper	Downgradient	G40S	Selenium, total	ug/l		Inorganic	4														
Upper	Downgradient	G15S	Sodium, total	mg/l		Inorganic	164.7897														
Upper	Downgradient	G51S	Sodium, total	mg/l	GMZ	Inorganic	164.7897	55	48		42	60	72	120	220	230	240	270	360		
Upper	Downgradient	G15S	Specific Conductance (field)	umhos	G1	Inorganic	3820														
Upper	Downgradient	R42S	Sulfate, Dissolved	mg/l	G1	Inorganic	360	170	180		110	52	47	26	11	78	39	1.4	39	11	120
Upper	Downgradient	R42S	Sulfate, total	mg/l		Inorganic	179.3731														
Upper	Downgradient	G51S	Tetrahydrofuran	ug/l	G2, GMZ	Organic	42		4.3			18		44		61		94			

Note: A highted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Bedrock	Upgradient	G09D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G09M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				14				< 1				< 1				< 1
Bedrock	Downgradient	G14D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G16D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Bedrock	Upgradient	G20D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G41D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G09D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G09M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				7				< 1				< 1				< 1
Bedrock	Downgradient	G14D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G16D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Bedrock	Upgradient	G20D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G41D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G09D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				1.4				1.2				4.1
Bedrock	Upgradient	G09M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				2.4
Bedrock	Downgradient	G14D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		23				37				25				26				29
Bedrock	Downgradient	G16D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																		< 1
Bedrock	Upgradient	G20D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G41D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				1.9				< 1
Bedrock	Upgradient	G09D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.1	0.12	0.36	0.55	0.19	0.194	< 0.1	0.12	< 0.1	< 0.1	0.1	0.29	< 0.1	< 0.1	0.29	0.19	0.16	0.18
Bedrock	Upgradient	G09M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.21	0.14	0.27	0.34	0.49	0.18	0.46	0.29	< 0.1	< 0.1	0.18	0.31	0.19	< 0.1	0.13	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G13D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.43	0.3	0.3	0.97	0.38	0.372	0.18	0.32	0.17	< 0.1	< 0.1	0.34	< 0.1	< 0.1	< 0.1	< 0.1	0.12	< 0.1
Bedrock	Upgradient	G13S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.19	0.13	0.27	0.63	0.23	0.235	0.24	0.24	0.13	0.18	0.13	0.4	< 0.1	< 0.1	0.1	< 0.1	0.14	0.13
Bedrock	Downgradient	G14D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.49	1.04	1.01	1.1	0.91	0.983	0.65	1.1	0.6	0.83	1.1	1.4	0.85	0.68	1.1	1.6	1	0.59
Bedrock	Downgradient	G16D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																		< 0.1
Bedrock	Upgradient	G20D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.05	0.09	0.14	0.25	0.09	0.436	< 0.1	< 0.061	0.19	< 0.1	< 0.1	0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Downgradient	G41D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	23	16.3	34.4	1.16	0.36	0.221	10	0.13	1	1.2	39	33	37	92	74	47	47	45
Bedrock	Upgradient	G09D	Ammonia as N, total	mg/l	GMZ	900		0.17				0.13				< 0.1				0.17				0.23
Bedrock	Upgradient	G09M	Ammonia as N, total	mg/l	GMZ	900		0.18				0.198				< 0.1				0.13				< 0.1
Bedrock	Upgradient	G13D	Ammonia as N, total	mg/l	GMZ	900		0.48				0.308				< 0.1				< 0.1				< 0.1
Bedrock	Upgradient	G13S	Ammonia as N, total	mg/l	GMZ	900		0.2				0.153				0.18				0.13				0.18
Bedrock	Downgradient	G14D	Ammonia as N, total	mg/l	GMZ	900		1.11				0.906				0.74				0.78				0.59
Bedrock	Downgradient	G16D	Ammonia as N, total	mg/l	GMZ	900																		< 0.1
Bedrock	Upgradient	G20D	Ammonia as N, total	mg/l	GMZ	900		0.12				0.084				< 0.1				< 0.1				< 0.1
Bedrock	Downgradient	G41D	Ammonia as N, total	mg/l	GMZ	900		16.7				0.112				0.41				55				59
Bedrock	Upgradient	G09D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	1.4	< 2	2.5	< 2	< 2
Bedrock	Upgradient	G09M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Bedrock	Upgradient	G13D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	1.4	< 2	< 2	< 2	< 2
Bedrock	Upgradient	G13S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	3.4	< 2	8.2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	1.4	< 2	< 2	< 2	< 2
Bedrock	Downgradient	G14D	Arsenic, Dissolved	ug/l	G1, GMZ	2	43	35	66	61	26	17.4	42	72	67	32	110	94	67	22	12	21	56	16
Bedrock	Downgradient	G16D	Arsenic, Dissolved	ug/l	G1, GMZ	2																		< 2
Bedrock	Upgradient	G20D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Bedrock	Downgradient	G41D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	2.1	< 2	< 2	< 3	< 0.53	< 3	< 0.84	< 3	< 3	< 3	1.3	< 2	< 2	2.3	< 2

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Bedrock	Upgradient	G09D	Arsenic, total	ug/l	GMZ	10		< 2				< 2				< 3				< 3				< 10
Bedrock	Upgradient	G09M	Arsenic, total	ug/l	GMZ	10		< 2				2.2				< 3				< 3				< 10
Bedrock	Upgradient	G13D	Arsenic, total	ug/l	GMZ	10		< 2				< 2				3.9				3.3				< 10
Bedrock	Upgradient	G13S	Arsenic, total	ug/l	GMZ	10		< 2				< 2				< 3				< 3				< 10
Bedrock	Downgradient	G14D	Arsenic, total	ug/l	GMZ	10		36				18.2				74				62				33
Bedrock	Downgradient	G16D	Arsenic, total	ug/l	GMZ	10																		< 10
Bedrock	Upgradient	G20D	Arsenic, total	ug/l	GMZ	10		< 2				6.22				< 3				< 3				< 10
Bedrock	Downgradient	G41D	Arsenic, total	ug/l	GMZ	10		< 2				< 2				< 3				< 3				< 10
Bedrock	Upgradient	G09D	Barium, total	ug/l	GMZ	225180.6		130				132				220				200				290
Bedrock	Upgradient	G09M	Barium, total	ug/l	GMZ	225180.6		150				146				180				170				150
Bedrock	Upgradient	G13D	Barium, total	ug/l	GMZ	225180.6		140				151				230				200				190
Bedrock	Upgradient	G13S	Barium, total	ug/l	GMZ	225180.6		150				148				150				140				150
Bedrock	Downgradient	G14D	Barium, total	ug/l	GMZ	225180.6		370				402				500				450				740
Bedrock	Downgradient	G16D	Barium, total	ug/l	GMZ	225180.6																		95
Bedrock	Upgradient	G20D	Barium, total	ug/l	GMZ	225180.6		71				64				68				68				81
Bedrock	Downgradient	G41D	Barium, total	ug/l	GMZ	225180.6		300				83.7				68				830				460
Bedrock	Upgradient	G09D	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	38	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Bedrock	Upgradient	G09M	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	21	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Bedrock	Upgradient	G13D	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	120	< 110	110	110	< 100	140	< 100	< 100	< 100	< 98	< 98	100	< 98	< 98
Bedrock	Upgradient	G13S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	110	110	110	110	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Bedrock	Downgradient	G14D	Boron, Dissolved	ug/l	G1, GMZ	98	110	< 110	< 110	< 110	< 110	< 110	< 100	96	< 100	100	120	110	130	DA 120	110	110	120	130
Bedrock	Downgradient	G16D	Boron, Dissolved	ug/l	G1, GMZ	98																		< 98
Bedrock	Upgradient	G20D	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	22	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Bedrock	Downgradient	G41D	Boron, Dissolved	ug/l	G1, GMZ	98	120	< 110	190	< 110	< 110	< 110	< 100	23	< 100	< 100	200	190	250	290	360	250	230	280
Bedrock	Upgradient	G09D	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Bedrock	Upgradient	G09M	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Bedrock	Upgradient	G13D	Boron, total	ug/l	GMZ	200		< 110				< 110				150				< 98				< 100
Bedrock	Upgradient	G13S	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Bedrock	Downgradient	G14D	Boron, total	ug/l	GMZ	200		< 110				< 110				100				120				130
Bedrock	Downgradient	G16D	Boron, total	ug/l	GMZ	200																		< 100
Bedrock	Upgradient	G20D	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Bedrock	Downgradient	G41D	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				300				300
Bedrock	Upgradient	G09D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	27.3	11.9	19.1	21.8	37.9	23.1	14	9.2	11	18	190	31	24	31	34	35	37	38
Bedrock	Upgradient	G09M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	117	100	143	155	165	181	160	190	140	150	20	190	190	200	170	180	180	180
Bedrock	Upgradient	G13D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	31.6	53.8	46.1	42.6	44.1	48.2	48	31	< 2	37	34	30	30	92	42	46	41	64
Bedrock	Upgradient	G13S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	45.8	64.7	58.7	49.2	48.6	48.3	44	36	< 2	45	33	26	28	53	30	32	35	72
Bedrock	Downgradient	G14D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	11.8	3.4	7.3	8.4	12.8	8.35	6.4	13	32	36	90	87	40	32	76	81	52	35
Bedrock	Downgradient	G16D	Chloride, Dissolved	mg/l	G1, GMZ	87.511																		8
Bedrock	Upgradient	G20D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	19.7	12.9	20.4	19.8	18.9	18.6	16	16	17	20	22	20	18	23	23	23	19	21
Bedrock	Downgradient	G41D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	82.9	38.8	105	14.9	14.8	16.4	40	13	14	19	180	< 2	180	210	200	140	18	150
Bedrock	Upgradient	G09D	Chloride, total	mg/l	GMZ	87.51186		16.5				26.5				2.5				31				36
Bedrock	Upgradient	G09M	Chloride, total	mg/l	GMZ	87.51186		112				192				160				200				180
Bedrock	Upgradient	G13D	Chloride, total	mg/l	GMZ	87.51186		54.7				45.4				32				91				68
Bedrock	Upgradient	G13S	Chloride, total	mg/l	GMZ	87.51186		75.5				50.2				20				55				74
Bedrock	Downgradient	G14D	Chloride, total	mg/l	GMZ	87.51186		4.2				7.71				36				34				40
Bedrock	Downgradient	G16D	Chloride, total	mg/l	GMZ	87.51186																		8.2
Bedrock	Upgradient	G20D	Chloride, total	mg/l	GMZ	87.51186		14.1				17.1				20				23				20
Bedrock	Downgradient	G41D	Chloride, total	mg/l	GMZ	87.51186		42.5				16.2				20				220				160

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Bedrock	Upgradient	G09D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G09M	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G13S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G14D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				5.9
Bedrock	Downgradient	G16D	Ethylbenzene	ug/l	G2, GMZ	5																		< 1
Bedrock	Upgradient	G20D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Downgradient	G41D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Bedrock	Upgradient	G09D	Fluoride, total	mg/l	GMZ	273.35		< 0.1				0.104				0.49				< 0.1				0.47
Bedrock	Upgradient	G09M	Fluoride, total	mg/l	GMZ	273.35		< 0.1				0.128				0.45				< 0.1				0.48
Bedrock	Upgradient	G13D	Fluoride, total	mg/l	GMZ	273.35		< 0.1				< 0.1				0.78				< 0.1				0.47
Bedrock	Upgradient	G13S	Fluoride, total	mg/l	GMZ	273.35		0.11				< 0.1				0.84				< 0.1				0.46
Bedrock	Downgradient	G14D	Fluoride, total	mg/l	GMZ	273.35		< 0.1				0.108				0.82				< 0.1				0.41
Bedrock	Downgradient	G16D	Fluoride, total	mg/l	GMZ	273.35																		0.53
Bedrock	Upgradient	G20D	Fluoride, total	mg/l	GMZ	273.35		0.11				< 0.1				0.64				0.5				0.51
Bedrock	Downgradient	G41D	Fluoride, total	mg/l	GMZ	273.35		0.13				0.125				1				< 0.1				0.54
Bedrock	Upgradient	G09D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1.3	0.93	0.84	0.84	0.84	0.53	0.5	0.28	0.59	< 0.2	2.1	< 0.2	0.22	< 0.2	< 0.2	0.79	< 0.2	1.6
Bedrock	Upgradient	G09M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.1	3.25	3.85	2.29	1.45	2.33	2.6	2.3	2.2	0.9	< 0.2	0.24	< 0.2	1.1	1.7	2.9	1.3	1.6
Bedrock	Upgradient	G13D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1.55	1.12	2.01	1.16	0.11	1.74	0.44	0.25	0.94	< 0.2	< 0.2	0.28	9.6	< 0.2	< 0.2	0.3	< 0.2	< 0.2
Bedrock	Upgradient	G13S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.11	0.16	0.11	< 0.1	< 0.1	< 0.1	< 0.05	< 0.026	< 0.2	0.32	< 0.2	0.22	8.6	< 0.2	0.37	1.8	1	0.76
Bedrock	Downgradient	G14D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.026	< 0.2	< 0.05	< 0.2	< 0.2	0.47	< 0.2	< 0.2	0.22	< 0.2	< 0.2
Bedrock	Downgradient	G16D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																		2.2
Bedrock	Upgradient	G20D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	5.13	4.24	5.57	3.24	5.73	3.91	3.8	4.2	3.8	4.7	3.8	4.5	4.2	4.8	4.8	8.9	3.8	4.2
Bedrock	Downgradient	G41D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	2.3	3.96	1.5	6.78	7.98	5.64	4.9	7.3	6.3	6.7	2.1	2.5	2	0.25	1.1	7.3	6.2	1.5
Bedrock	Upgradient	G09D	Nitrate as N, total	mg/l	GMZ	11.7389		1.27				0.611				0.29				< 0.2				< 0.2
Bedrock	Upgradient	G09M	Nitrate as N, total	mg/l	GMZ	11.7389		3.43				2.1				2.6				1.3				1.2
Bedrock	Upgradient	G13D	Nitrate as N, total	mg/l	GMZ	11.7389		1.11				1.75				< 0.05				0.24				< 0.2
Bedrock	Upgradient	G13S	Nitrate as N, total	mg/l	GMZ	11.7389		0.32				< 0.1				0.3				< 0.2				0.74
Bedrock	Downgradient	G14D	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				0.169				< 0.05				< 0.2				< 0.2
Bedrock	Downgradient	G16D	Nitrate as N, total	mg/l	GMZ	11.7389																		2.2
Bedrock	Upgradient	G20D	Nitrate as N, total	mg/l	GMZ	11.7389		4.54				4.6				4.6				4.8				4.1
Bedrock	Downgradient	G41D	Nitrate as N, total	mg/l	GMZ	11.7389		4.08				5.77				6.9				0.25				1.1
Bedrock	Upgradient	G09D	Potassium, total	mg/l	GMZ	29.00582		1.5				< 2				0.94				0.73				0.89
Bedrock	Upgradient	G09M	Potassium, total	mg/l	GMZ	29.00582		< 1.1				< 2				0.89				0.84				0.7
Bedrock	Upgradient	G13D	Potassium, total	mg/l	GMZ	29.00582		5.2				4.78				11				5.8				4.8
Bedrock	Upgradient	G13S	Potassium, total	mg/l	GMZ	29.00582		4.8				6.81				5.3				4				4
Bedrock	Downgradient	G14D	Potassium, total	mg/l	GMZ	29.00582		3.1				2.3				2.2				2.3				2.3
Bedrock	Downgradient	G16D	Potassium, total	mg/l	GMZ	29.00582																		1.2
Bedrock	Upgradient	G20D	Potassium, total	mg/l	GMZ	29.00582		1.4				< 2				1.6				1.7				1.5
Bedrock	Downgradient	G41D	Potassium, total	mg/l	GMZ	29.00582		9.4				< 2				1.9				25				25
Bedrock	Upgradient	G09D	Sodium, total	mg/l	GMZ	164.7897		16				16.7				10				10				18
Bedrock	Upgradient	G09M	Sodium, total	mg/l	GMZ	164.7897		41				53				57				68				70
Bedrock	Upgradient	G13D	Sodium, total	mg/l	GMZ	164.7897		33				33.8				45				37				39
Bedrock	Upgradient	G13S	Sodium, total	mg/l	GMZ	164.7897		52				36.1				33				28				39
Bedrock	Downgradient	G14D	Sodium, total	mg/l	GMZ	164.7897		12				17.1				12				19				19
Bedrock	Downgradient	G16D	Sodium, total	mg/l	GMZ	164.7897																		4.7
Bedrock	Upgradient	G20D	Sodium, total	mg/l	GMZ	164.7897		8				6.36				8.1				7.6				6.7
Bedrock	Downgradient	G41D	Sodium, total	mg/l	GMZ	164.7897		28				4.72				6.6				86				69
Bedrock	Upgradient	G09D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Bedrock	Upgradient	G09M	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Bedrock	Upgradient	G13D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Bedrock	Upgradient	G13S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Bedrock	Downgradient	G14D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Bedrock	Downgradient	G16D	Tetrahydrofuran	ug/l	G2, GMZ	42																		< 5
Bedrock	Upgradient	G20D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Bedrock	Downgradient	G41D	Tetrahydrofuran	ug/l	G2, GMZ	42		6				< 5				< 5				13				11

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Lower	Downgradient	G03M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G16M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5						< 5				< 1				< 1				< 1
Lower	Downgradient	G18D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G33D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G34D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G35D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G36S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G37D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Lower	Downgradient	G38S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G39S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G41M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G52M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	G54M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	R39S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Downgradient	G03M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G16M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5						< 5				< 1				< 1				< 1
Lower	Downgradient	G18D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G33D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G34D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G35D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G36S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G37D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Lower	Downgradient	G38S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G39S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G41M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G52M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	G54M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	R39S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Downgradient	G03M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				2.8				3.6
Lower	Downgradient	G16M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5						< 5				23				8.6				< 1
Lower	Downgradient	G18D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G33D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G34D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G35D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				2.7				< 1				< 1
Lower	Downgradient	G36S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G37D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Lower	Downgradient	G38S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G39S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				4.3				3.4
Lower	Downgradient	G41M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		6				6				3.9				5.4				5.3
Lower	Compliance	G52M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	G54M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	R39S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																		
Lower	Downgradient	G03M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	6.46	5.86	1.34	3.76	1.82	1.61	1.2	1.9	0.72	0.57	3.6	47	42	72	160	160	200	150
Lower	Downgradient	G16M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1010		0.23	16.6	9.04	5.98	4.6		< 0.1	130	1.3	1.4	< 0.1	3.1	17	76	45	34
Lower	Downgradient	G18D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.07	0.1	0.05	0.13	0.18	0.299	0.38	< 0.061	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.12	0.54	1.5	0.34	< 0.1
Lower	Downgradient	G33D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.07	0.17	< 0.05	1.21	0.3	< 0.05	57	< 0.061	< 0.1	0.35	0.67	0.24	0.15	< 0.1	0.17	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G34D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.24	0.09	< 0.05		< 0.05	0.107	< 0.1	< 0.061	< 0.1	< 0.1	< 0.1	0.16	< 0.1	< 0.1	0.14	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G35D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	45.5	121	24.4	638	184	40.2	< 0.1	130	270	190	15	3.8	3.1	16	11	5	3.1	4.3
Lower	Downgradient	G36S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.1	0.16	< 0.05	0.14	0.16	0.162	0.11	< 0.061	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1	0.16	0.11	< 0.1	< 0.1
Lower	Downgradient	G37D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9									1.5	2.1	2.3	1.7	1.4	1.2				1.3
Lower	Downgradient	G38S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	90.9	91.5	106	183	886	69.2	68	110	74	58	62	120	85	53	44	50	63	46
Lower	Compliance	G39S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.68	0.54	0.1	0.78	0.51	0.55	0.25	0.57	0.21	0.24	1.3	1.1	1.3	1.6	2.5	4.5	4.4	5
Lower	Downgradient	G41M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	144	153	152	237	190	164	170	130	0.51	100	140	60	93	72	82	130	74	120
Lower	Compliance	G52M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																		
Lower	Compliance	G54M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																		
Lower	Compliance	R39S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Lower	Downgradient	G03M	Ammonia as N, total	mg/l	GMZ	900		6.52				16.1				0.65				72				160
Lower	Downgradient	G16M	Ammonia as N, total	mg/l	GMZ	900						4.5				170				3.2				40
Lower	Downgradient	G18D	Ammonia as N, total	mg/l	GMZ	900		0.12				0.071				< 0.1				0.41				< 0.1
Lower	Downgradient	G33D	Ammonia as N, total	mg/l	GMZ	900		0.25				0.066				< 0.1				< 0.1				< 0.1
Lower	Downgradient	G34D	Ammonia as N, total	mg/l	GMZ	900		0.13				0.098				280				< 0.1				< 0.1
Lower	Downgradient	G35D	Ammonia as N, total	mg/l	GMZ	900		129				49.5				140				85				4.7
Lower	Downgradient	G36S	Ammonia as N, total	mg/l	GMZ	900		0.24				0.171				< 0.1				< 0.1				< 0.1
Lower	Downgradient	G37D	Ammonia as N, total	mg/l	GMZ	900										2.2				1.2				1.3
Lower	Downgradient	G38S	Ammonia as N, total	mg/l	GMZ	900		105				70				82				59				48
Lower	Compliance	G39S	Ammonia as N, total	mg/l	GMZ	900		0.58				0.531				0.31				1.8				4.8
Lower	Downgradient	G41M	Ammonia as N, total	mg/l	GMZ	900		159				167				120				81				120
Lower	Compliance	G52M	Ammonia as N, total	mg/L	GMZ	900																		
Lower	Compliance	G54M	Ammonia as N, total	mg/L	GMZ	900																		
Lower	Compliance	R39S	Ammonia as N, total	mg/L	GMZ	900																		
Lower	Downgradient	G03M	Arsenic, Dissolved	ug/l	G1, GMZ	2	3	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	1.9	< 2	2.4	2.6	2.5
Lower	Downgradient	G16M	Arsenic, Dissolved	ug/l	G1, GMZ	2			< 2	< 2	< 2	< 2	< 3		< 3	3	< 3	< 3	< 3	< 3	< 2	< 2	< 2	< 2
Lower	Downgradient	G18D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	5.2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Lower	Downgradient	G33D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	< 2	9	< 0.53	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Lower	Downgradient	G34D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	3.1	< 3	< 0.53	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Lower	Downgradient	G35D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	8.7	5.66	< 3	14	14	13	9.2	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Lower	Downgradient	G36S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	2.6	< 2	< 2	< 3	< 0.53	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Lower	Downgradient	G37D	Arsenic, Dissolved	ug/l	G1, GMZ	2									< 3	< 0.84	< 3	< 3	< 3	< 0.84				< 2
Lower	Downgradient	G38S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	3.2	3.2	3.1	3.44	< 3	3.3	< 3	< 0.84	5.2	6.4	7.6	5.3	3.4	5.3	5.7	4.1
Lower	Compliance	G39S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	< 2	< 3	< 2	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Lower	Downgradient	G41M	Arsenic, Dissolved	ug/l	G1, GMZ	2	20	24	29	27	23	6	< 3	29	29	25	17	19	16	16	24	18	25	16
Lower	Compliance	G52M	Arsenic, Dissolved	ug/L	G1, GMZ	2																		
Lower	Compliance	G54M	Arsenic, Dissolved	ug/L	G1, GMZ	2																		
Lower	Compliance	R39S	Arsenic, Dissolved	ug/L	G1, GMZ	2																		
Lower	Downgradient	G03M	Arsenic, total	ug/l	GMZ	10		< 2				< 2				< 3				< 3				< 10
Lower	Downgradient	G16M	Arsenic, total	ug/l	GMZ	10		0				< 2				5				15				< 10
Lower	Downgradient	G18D	Arsenic, total	ug/l	GMZ	10		< 2				< 2				< 3				< 3				< 10
Lower	Downgradient	G33D	Arsenic, total	ug/l	GMZ	10		< 2				< 2				4.9				4				< 10
Lower	Downgradient	G34D	Arsenic, total	ug/l	GMZ	10		< 2				< 2				< 3				< 3				< 10
Lower	Downgradient	G35D	Arsenic, total	ug/l	GMZ	10		5				6.55				36				3.1				< 10
Lower	Downgradient	G36S	Arsenic, total	ug/l	GMZ	10		< 2				6.66				< 3				< 3				< 10
Lower	Downgradient	G37D	Arsenic, total	ug/l	GMZ	10										4.6				< 3				< 10
Lower	Downgradient	G38S	Arsenic, total	ug/l	GMZ	10		3				6.99				6.1				6.5				< 10
Lower	Compliance	G39S	Arsenic, total	ug/l	GMZ	10		< 2				3.5				< 3				3.5				< 10
Lower	Downgradient	G41M	Arsenic, total	ug/l	GMZ	10		30				10				35				38				17
Lower	Compliance	G52M	Arsenic, total	ug/L	GMZ	10																		
Lower	Compliance	G54M	Arsenic, total	ug/L	GMZ	10																		
Lower	Compliance	R39S	Arsenic, total	ug/L	GMZ	10																		
Lower	Downgradient	G03M	Barium, total	ug/l	GMZ	225180.6		150				97.9				110				620				550
Lower	Downgradient	G16M	Barium, total	ug/l	GMZ	225180.6		0				374				550				490				400
Lower	Downgradient	G18D	Barium, total	ug/l	GMZ	225180.6		< 56				< 56				41				41				45
Lower	Downgradient	G33D	Barium, total	ug/l	GMZ	225180.6		110				80.1				110				98				92
Lower	Downgradient	G34D	Barium, total	ug/l	GMZ	225180.6		< 56				< 56				32				33				31
Lower	Downgradient	G35D	Barium, total	ug/l	GMZ	225180.6		1200				128				560				860				230
Lower	Downgradient	G36S	Barium, total	ug/l	GMZ	225180.6		170				174				210				170				160
Lower	Downgradient	G37D	Barium, total	ug/l	GMZ	225180.6										98				53				49
Lower	Downgradient	G38S	Barium, total	ug/l	GMZ	225180.6		1200				924				1100				820				810
Lower	Compliance	G39S	Barium, total	ug/l	GMZ	225180.6		140				176				160				210				250
Lower	Downgradient	G41M	Barium, total	ug/l	GMZ	225180.6		570				334				390				440				430
Lower	Compliance	G52M	Barium, total	ug/L	GMZ	225180.6																		
Lower	Compliance	G54M	Barium, total	ug/L	GMZ	225180.6																		
Lower	Compliance	R39S	Barium, total	ug/L	GMZ	225180.6																		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Lower	Downgradient	G03M	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	41	< 100	< 100	190	450	540	560	1100	1000	910	980
Lower	Downgradient	G16M	Boron, Dissolved	ug/l	G1, GMZ	98			270	< 110	75	< 110	< 100		< 100	2400	< 100	< 100	< 100	110	200	520	350	170
Lower	Downgradient	G18D	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	160	< 110	< 100	21	< 100	< 100	< 100	< 100	< 100	< 98	< 98	120	< 98	< 98
Lower	Downgradient	G33D	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	470	15	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Lower	Downgradient	G34D	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	17	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Lower	Downgradient	G35D	Boron, Dissolved	ug/l	G1, GMZ	98	280	720	130	1500	1800	218	< 100	730	1400	1300	140	< 100	< 100	99	100	< 98	< 98	< 98
Lower	Downgradient	G36S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	19	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Lower	Downgradient	G37D	Boron, Dissolved	ug/l	G1, GMZ	98									< 100	< 100	< 100	< 100	< 100	< 98				< 98
Lower	Downgradient	G38S	Boron, Dissolved	ug/l	G1, GMZ	98	360	410	400	410	310	255	390	420	330	280	520	E 660	440	260	170	240	330	240
Lower	Compliance	G39S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	82.9	< 100	100	100	< 100	110	120	140	130	140	140	120	140
Lower	Downgradient	G41M	Boron, Dissolved	ug/l	G1, GMZ	98	850	880	840	920	1100	1050	920	860	830	760	630	330	540	460	430	690	400	640
Lower	Compliance	G52M	Boron, Dissolved	ug/L	G1, GMZ	98																		
Lower	Compliance	G54M	Boron, Dissolved	ug/L	G1, GMZ	98																		
Lower	Compliance	R39S	Boron, Dissolved	ug/L	G1, GMZ	98																		
Lower	Downgradient	G03M	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				560				980
Lower	Downgradient	G16M	Boron, total	ug/l	GMZ	200						57.2				2500				130				180
Lower	Downgradient	G18D	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Lower	Downgradient	G33D	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Lower	Downgradient	G34D	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Lower	Downgradient	G35D	Boron, total	ug/l	GMZ	200		720				212				1200				550				< 100
Lower	Downgradient	G36S	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Lower	Downgradient	G37D	Boron, total	ug/l	GMZ	200										< 98				< 98				< 100
Lower	Downgradient	G38S	Boron, total	ug/l	GMZ	200		400				259				290				260				210
Lower	Compliance	G39S	Boron, total	ug/l	GMZ	200		< 110				93.4				100				140				160
Lower	Downgradient	G41M	Boron, total	ug/l	GMZ	200		880				1050				790				470				630
Lower	Compliance	G52M	Boron, total	ug/L	GMZ	200																		
Lower	Compliance	G54M	Boron, total	ug/L	GMZ	200																		
Lower	Compliance	R39S	Boron, total	ug/L	GMZ	200																		
Lower	Downgradient	G03M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	36.6	25.1	51	36.8	36.3	37	37	65	34	35	150	340	300	370	500	560	500	270
Lower	Downgradient	G16M	Chloride, Dissolved	mg/l	G1, GMZ	87.511			186	32.2	64	45.3	50		42	690	2.1	49	60	57	150	220	180	51
Lower	Downgradient	G18D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	27.7	17.8	26.1	28	30.8	31.5	25	490	26	27	29	30	29	30	24	19	32	31
Lower	Downgradient	G33D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	27.5	18.2	31.3	23.9	17	20.6	200	18	22	21	19	15	14	15	12	11	11	9.5
Lower	Downgradient	G34D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	23.6	19.3	42.9	27.4	25.4	31.6	31	28	28	31	41	32	30	29	33	28	27	28
Lower	Downgradient	G35D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	130	247	87.3	522	376	59.1	18	460	530	340	55	38	42	46	63	49	46	52
Lower	Downgradient	G36S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	28.2	19.8	28.8	28.9	29.8	33.6	30	28	33	30	26	12	13	13	19	19	14	13
Lower	Downgradient	G37D	Chloride, Dissolved	mg/l	G1, GMZ	87.511									26	27	37	25	24	27				8
Lower	Downgradient	G38S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	253	169	271	302	186	172	330	310	220	52	610	480	220	100	77	140	180	100
Lower	Compliance	G39S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	101	54.6	101	105	109	123	110	110	110	100	24	120	96	110	100	110	110	100
Lower	Downgradient	G41M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	410	295	413	381	428	329	300	310	250	260	350	33	150	240	240	330	190	300
Lower	Compliance	G52M	Chloride, Dissolved	mg/L	G1, GMZ	87.511																		
Lower	Compliance	G54M	Chloride, Dissolved	mg/L	G1, GMZ	87.511																		
Lower	Compliance	R39S	Chloride, Dissolved	mg/L	G1, GMZ	87.511																		
Lower	Downgradient	G03M	Chloride, total	mg/l	GMZ	87.51186		27.1				37.9				34				370				550
Lower	Downgradient	G16M	Chloride, total	mg/l	GMZ	87.51186						44.8				690				57				52
Lower	Downgradient	G18D	Chloride, total	mg/l	GMZ	87.51186		19.6				31.3				26				31				31
Lower	Downgradient	G33D	Chloride, total	mg/l	GMZ	87.51186		22.8				20.2				42				15				9.7
Lower	Downgradient	G34D	Chloride, total	mg/l	GMZ	87.51186		20				31.4				32				30				28
Lower	Downgradient	G35D	Chloride, total	mg/l	GMZ	87.51186		264				58.4				550				240				52
Lower	Downgradient	G36S	Chloride, total	mg/l	GMZ	87.51186		22.7				31.4				31				14				13
Lower	Downgradient	G37D	Chloride, total	mg/l	GMZ	87.51186										29				27				23
Lower	Downgradient	G38S	Chloride, total	mg/l	GMZ	87.51186		185				174				29				100				100
Lower	Compliance	G39S	Chloride, total	mg/l	GMZ	87.51186		68				123				110				110				100
Lower	Downgradient	G41M	Chloride, total	mg/l	GMZ	87.51186		300				323				28				240				300
Lower	Compliance	G52M	Chloride, total	mg/L	GMZ	87.51186																		
Lower	Compliance	G54M	Chloride, total	mg/L	GMZ	87.51186																		
Lower	Compliance	R39S	Chloride, total	mg/L	GMZ	87.51186																		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Lower	Downgradient	G03M	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G16M	Ethylbenzene	ug/l	G2, GMZ	5						< 5				5.4				< 1				< 1
Lower	Downgradient	G18D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G33D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G34D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G35D	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G36S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G37D	Ethylbenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Lower	Downgradient	G38S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G39S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Downgradient	G41M	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Lower	Compliance	G52M	Ethylbenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	G54M	Ethylbenzene	ug/L	G2, GMZ	5																		
Lower	Compliance	R39S	Ethylbenzene	ug/L	G2, GMZ	5																		
Lower	Downgradient	G03M	Fluoride, total	mg/l	GMZ	273.35		0.13				0.113				0.65				< 0.1				0.49
Lower	Downgradient	G16M	Fluoride, total	mg/l	GMZ	273.35						0.116				0.79				< 0.1				0.54
Lower	Downgradient	G18D	Fluoride, total	mg/l	GMZ	273.35		< 0.1				< 0.1				0.87				0.47				0.49
Lower	Downgradient	G33D	Fluoride, total	mg/l	GMZ	273.35		0.15				0.158				< 0.1				0.47				0.48
Lower	Downgradient	G34D	Fluoride, total	mg/l	GMZ	273.35		< 0.1				0.11				< 0.1				0.47				0.48
Lower	Downgradient	G35D	Fluoride, total	mg/l	GMZ	273.35		0.15				0.199				< 0.1				< 0.1				0.45
Lower	Downgradient	G36S	Fluoride, total	mg/l	GMZ	273.35		0.13				0.122				0.77				0.47				0.45
Lower	Downgradient	G37D	Fluoride, total	mg/l	GMZ	273.35										< 0.1				0.46				0.5
Lower	Downgradient	G38S	Fluoride, total	mg/l	GMZ	273.35		0.19				0.188				< 0.1				0.53				0.54
Lower	Compliance	G39S	Fluoride, total	mg/l	GMZ	273.35		< 0.1				< 0.1				0.91				< 0.1				0.45
Lower	Downgradient	G41M	Fluoride, total	mg/l	GMZ	273.35		0.16				0.278				0.63				< 0.1				0.55
Lower	Compliance	G52M	Fluoride, total	mg/L	GMZ	273.35																		
Lower	Compliance	G54M	Fluoride, total	mg/L	GMZ	273.35																		
Lower	Compliance	R39S	Fluoride, total	mg/L	GMZ	273.35																		
Lower	Downgradient	G03M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.96	8.52	7.36	7.68	8.98	8.49	7.9	9.1	8.1	9	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.68	4.6	7.9
Lower	Downgradient	G16M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74			0.58	1.1	< 0.1	5.86	8.2		4.8	0.4	< 0.2	< 0.2	0.34	0.58	2.7	3.6	< 0.2	2.2
Lower	Downgradient	G18D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	10.4	11.7	10.7	8.86	12.7	10.5	11	11	10	11	11	13	12	12	10	7.2	12	11
Lower	Downgradient	G33D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1.19	11.5	8.67	10.9	< 0.1	6.58	0.089	10	9.4	12	7.7	7.8	5.4	4.5	4.8	7.5	7.7	3.3
Lower	Downgradient	G34D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.77	8.67	4.65	8.32	< 0.1	5.8	6.8	8.9	7.8	8.7	7.5	8.8	9.4	10	9.3	11	10	9.1
Lower	Downgradient	G35D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1.92	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	10	2.1	< 0.2	0.065	< 0.2	3.4	4.5	1	3.7	5.3	5.8	5.3
Lower	Downgradient	G36S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9.67	11.1	11	11.4	11.5	9.57	13	11	10	11	9.3	7	6.3	6.8	8.8	6.6	7.2	6.5
Lower	Downgradient	G37D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74									9.1	1	7.6	8.1	8.4	11				9.9
Lower	Downgradient	G38S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.556	< 0.05	0.03	2.3	0.3	< 0.2	0.43	< 0.2	< 0.2	< 0.2	0.57	< 0.2	0.36
Lower	Compliance	G39S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	0.1	0.037	< 0.2	0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	12	0.28	0.31
Lower	Downgradient	G41M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.18	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.026	2.1	< 0.05	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.44	< 0.2	< 0.2
Lower	Compliance	G52M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																		
Lower	Compliance	G54M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																		
Lower	Compliance	R39S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																		
Lower	Downgradient	G03M	Nitrate as N, total	mg/l	GMZ	11.7389		8.43				9.21				9.5				< 0.2				< 0.2
Lower	Downgradient	G16M	Nitrate as N, total	mg/l	GMZ	11.7389						6.2				0.38				0.68				4.1
Lower	Downgradient	G18D	Nitrate as N, total	mg/l	GMZ	11.7389		11.9				11.1				11				12				11
Lower	Downgradient	G33D	Nitrate as N, total	mg/l	GMZ	11.7389		12.1				7.29				1.6				4.4				3.4
Lower	Downgradient	G34D	Nitrate as N, total	mg/l	GMZ	11.7389		9.17				5.56				6.9				9.9				9.1
Lower	Downgradient	G35D	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				< 0.1				< 0.2				2.2				5.4
Lower	Downgradient	G36S	Nitrate as N, total	mg/l	GMZ	11.7389		11.6				11				11				6.8				6.5
Lower	Downgradient	G37D	Nitrate as N, total	mg/l	GMZ	11.7389										8.9				11				9.2
Lower	Downgradient	G38S	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				0.488				8.9				< 0.2				2.2
Lower	Compliance	G39S	Nitrate as N, total	mg/l	GMZ	11.7389		0.11				< 0.1				0.21				< 0.2				0.3
Lower	Downgradient	G41M	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				< 0.1				< 0.05				< 0.2				< 0.2
Lower	Compliance	G52M	Nitrate as N, total	mg/L	GMZ	11.7389																		
Lower	Compliance	G54M	Nitrate as N, total	mg/L	GMZ	11.7389																		
Lower	Compliance	R39S	Nitrate as N, total	mg/L	GMZ	11.7389																		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Lower	Downgradient	G03M	Potassium, total	mg/l	GMZ	29.00582		8				3.42				3.9				38				88
Lower	Downgradient	G16M	Potassium, total	mg/l	GMZ	29.00582						7.08				170				18				18
Lower	Downgradient	G18D	Potassium, total	mg/l	GMZ	29.00582		3.4				2.34				3				2.8				3
Lower	Downgradient	G33D	Potassium, total	mg/l	GMZ	29.00582		2.3				< 2				2.2				1.2				1.1
Lower	Downgradient	G34D	Potassium, total	mg/l	GMZ	29.00582		2.5				< 2				1.9				1.7				1.8
Lower	Downgradient	G35D	Potassium, total	mg/l	GMZ	29.00582		65				34				100				46				7.5
Lower	Downgradient	G36S	Potassium, total	mg/l	GMZ	29.00582		1.8				< 2				1.4				0.94				0.86
Lower	Downgradient	G37D	Potassium, total	mg/l	GMZ	29.00582										6.7				3.3				2.8
Lower	Downgradient	G38S	Potassium, total	mg/l	GMZ	29.00582		46				37.8				37				30				1.2
Lower	Compliance	G39S	Potassium, total	mg/l	GMZ	29.00582		4.2				5.02				5.6				9.4				8.9
Lower	Downgradient	G41M	Potassium, total	mg/l	GMZ	29.00582		80				81.7				62				49				58
Lower	Compliance	G52M	Potassium, total	mg/L	GMZ	29.00582																		
Lower	Compliance	G54M	Potassium, total	mg/L	GMZ	29.00582																		
Lower	Compliance	R39S	Potassium, total	mg/L	GMZ	29.00582																		
Lower	Downgradient	G03M	Sodium, total	mg/l	GMZ	164.7897		17				10.9				12				150				260
Lower	Downgradient	G16M	Sodium, total	mg/l	GMZ	164.7897						14.6				470				28				37
Lower	Downgradient	G18D	Sodium, total	mg/l	GMZ	164.7897		9.1				9.17				8.6				9.3				11
Lower	Downgradient	G33D	Sodium, total	mg/l	GMZ	164.7897		9.1				5.92				7.3				5.3				5.3
Lower	Downgradient	G34D	Sodium, total	mg/l	GMZ	164.7897		6.2				5.83				6.1				6.3				6.5
Lower	Downgradient	G35D	Sodium, total	mg/l	GMZ	164.7897		160				28.1				18				140				28
Lower	Downgradient	G36S	Sodium, total	mg/l	GMZ	164.7897		9.8				9.25				11				4.6				5.2
Lower	Downgradient	G37D	Sodium, total	mg/l	GMZ	164.7897										9.8				8.5				8
Lower	Downgradient	G38S	Sodium, total	mg/l	GMZ	164.7897		99				57.8				83				52				4.7
Lower	Compliance	G39S	Sodium, total	mg/l	GMZ	164.7897		45				42				45				47				58
Lower	Downgradient	G41M	Sodium, total	mg/l	GMZ	164.7897		180				164				150				100				140
Lower	Compliance	G52M	Sodium, total	mg/L	GMZ	164.7897																		
Lower	Compliance	G54M	Sodium, total	mg/L	GMZ	164.7897																		
Lower	Compliance	R39S	Sodium, total	mg/L	GMZ	164.7897																		
Lower	Downgradient	G03M	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				21				43
Lower	Downgradient	G16M	Tetrahydrofuran	ug/l	G2, GMZ	42						< 5				59				< 5				< 5
Lower	Downgradient	G18D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Lower	Downgradient	G33D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Lower	Downgradient	G34D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Lower	Downgradient	G35D	Tetrahydrofuran	ug/l	G2, GMZ	42		27				< 5				16				< 5				< 5
Lower	Downgradient	G36S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Lower	Downgradient	G37D	Tetrahydrofuran	ug/l	G2, GMZ	42										< 5				< 5				< 5
Lower	Downgradient	G38S	Tetrahydrofuran	ug/l	G2, GMZ	42		13				12				18				< 5				< 5
Lower	Compliance	G39S	Tetrahydrofuran	ug/l	G2, GMZ	42		6				< 5				< 5				< 5				< 5
Lower	Downgradient	G41M	Tetrahydrofuran	ug/l	G2, GMZ	42		37				30				22				14				21
Lower	Compliance	G52M	Tetrahydrofuran	ug/L	G2, GMZ	42																		
Lower	Compliance	G54M	Tetrahydrofuran	ug/L	G2, GMZ	42																		
Lower	Compliance	R39S	Tetrahydrofuran	ug/L	G2, GMZ	42																		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Upper	Downgradient	G119	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G130	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G15S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G17S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G18S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 5				
Upper	Downgradient	G33S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G34S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G35S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G37S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G40S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5						< 5				< 1				< 1				< 1
Upper	Downgradient	G41S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G50S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																		
Upper	Downgradient	G51S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																		
Upper	Compliance	G52S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																		
Upper	Compliance	G54S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																		
Upper	Downgradient	R03S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	R42S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G119	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G130	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G15S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G17S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G18S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 5				
Upper	Downgradient	G33S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G34S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G35S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G37S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G40S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5						< 5				< 1				< 1				< 1
Upper	Downgradient	G41S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G50S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																		
Upper	Downgradient	G51S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																		
Upper	Compliance	G52S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																		
Upper	Compliance	G54S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																		
Upper	Downgradient	R03S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	R42S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G119	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G130	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G15S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		13				12				9.4				11				8.7
Upper	Downgradient	G17S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G18S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 5				
Upper	Downgradient	G33S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G34S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5										< 1				1.1				< 1
Upper	Downgradient	G35S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G37S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G40S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5						7				6.3				5.3				4
Upper	Downgradient	G41S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				6.6				3.5				< 1
Upper	Downgradient	G50S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																		
Upper	Downgradient	G51S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																		
Upper	Compliance	G52S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																		
Upper	Compliance	G54S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																		
Upper	Downgradient	R03S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				4.1				5.6
Upper	Downgradient	R42S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		10				12				< 1				< 1				< 1
Upper	Downgradient	G119	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																		< 0.1
Upper	Downgradient	G130	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																		< 0.1
Upper	Downgradient	G15S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	90.9	122	118	143	129	136	130	130	140	140	90	120	120	110	110	110		110
Upper	Downgradient	G17S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.13	0.23	0.24	0.38	0.21	< 0.05	< 0.1	< 0.061	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G18S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.6	0.34	1.03	0.26	0.25	6.9	5.8	1.9	< 0.1	< 0.1	< 0.1	15	100	170				
Upper	Downgradient	G33S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																		< 0.1
Upper	Downgradient	G34S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9									21	17	18	15	16	17				8.3
Upper	Downgradient	G35S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9									10	8.7	12	18	21	22				15
Upper	Downgradient	G37S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.1	0.21	0.12	0.27	0.17	0.157	0.51	< 0.061	0.16	< 0.1	< 0.1	0.24	< 0.1	0.23	< 0.1	< 0.1	0.19	< 0.1
Upper	Downgradient	G40S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	8.9		1.44	29.9	269	26.1	13	13	17	20	9.7	12	13	13	12	13	12	12
Upper	Downgradient	G41S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	215	160	215	272	157	109	210	220	220	250	94	91	50	68	140	86	91	100
Upper	Downgradient	G50S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																		
Upper	Downgradient	G51S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																		
Upper	Compliance	G52S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																		
Upper	Compliance	G54S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																		
Upper	Downgradient	R03S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	25.3	20.1	15.6	15.3	9.85	16.1	20		10	13	11	150	130	120	170	190	170	170
Upper	Downgradient	R42S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.35	1.01	0.46	2.58	0.32	1.19			1.8	1.8	1.2	0.87	0.72	0.53	2.6	2.6	0.81	1.5

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Upper	Downgradient	G119	Ammonia as N, total	mg/l	GMZ	900																		< 0.1
Upper	Downgradient	G130	Ammonia as N, total	mg/l	GMZ	900																		< 0.1
Upper	Downgradient	G15S	Ammonia as N, total	mg/l	GMZ	900		132				129				< 0.1				140				120
Upper	Downgradient	G17S	Ammonia as N, total	mg/l	GMZ	900		0.32				0.13				< 0.1				< 0.1				0.11
Upper	Downgradient	G18S	Ammonia as N, total	mg/l	GMZ	900		0.65				5.3				0.12				170				
Upper	Downgradient	G33S	Ammonia as N, total	mg/l	GMZ	900																		< 0.1
Upper	Downgradient	G34S	Ammonia as N, total	mg/l	GMZ	900										23				20				8.9
Upper	Downgradient	G35S	Ammonia as N, total	mg/l	GMZ	900										12				15				16
Upper	Downgradient	G37S	Ammonia as N, total	mg/l	GMZ	900		0.22				0.093				< 0.1				0.26				< 0.1
Upper	Downgradient	G40S	Ammonia as N, total	mg/l	GMZ	900						23				19				16				13
Upper	Downgradient	G41S	Ammonia as N, total	mg/l	GMZ	900		176				121				280				40				110
Upper	Downgradient	G50S	Ammonia as N, total	mg/l	GMZ	900																		
Upper	Downgradient	G51S	Ammonia as N, total	mg/l	GMZ	900																		
Upper	Compliance	G52S	Ammonia as N, total	mg/L	GMZ	900																		
Upper	Compliance	G54S	Ammonia as N, total	mg/L	GMZ	900																		
Upper	Downgradient	R03S	Ammonia as N, total	mg/l	GMZ	900		22.4				1.84				J 13				120				180
Upper	Downgradient	R42S	Ammonia as N, total	mg/l	GMZ	900		1.25				1.6				2				0.73				1.6
Upper	Downgradient	G119	Arsenic, Dissolved	ug/l	G1, GMZ	2																		< 2
Upper	Downgradient	G130	Arsenic, Dissolved	ug/l	G1, GMZ	2																		< 2
Upper	Downgradient	G15S	Arsenic, Dissolved	ug/l	G1, GMZ	2	6.3	7	2.6	7.4	70.8	3	< 3	< 2	5.3	3.7	5.6	7	< 3	11	7.1	3.4		2.9
Upper	Downgradient	G17S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	2.3	2.1	10.4	< 2	< 3	< 0.53	< 3	< 0.84	< 3	< 3	< 3	1	< 2	< 2	< 2	< 2
Upper	Downgradient	G18S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	< 2	< 2	< 2	4	< 3	< 2	< 3	< 0.84	< 3	6.4	5.3	K 18				
Upper	Downgradient	G33S	Arsenic, Dissolved	ug/l	G1, GMZ	2																		< 2
Upper	Downgradient	G34S	Arsenic, Dissolved	ug/l	G1, GMZ	2									< 3	< 0.84	< 3	< 3	< 3	< 0.84				< 2
Upper	Downgradient	G35S	Arsenic, Dissolved	ug/l	G1, GMZ	2									< 3	< 0.84	< 3	< 3	< 3	1.8				< 2
Upper	Downgradient	G37S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	< 2	3.7	< 2	< 2	< 2	< 3	< 0.53	< 3	< 0.84	< 3	< 3	< 3	< 0.84	< 2	< 2	< 2	< 2
Upper	Downgradient	G40S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2.2	0	< 2	< 2	< 2	< 2	< 3	< 0.53	< 3	< 0.84	< 3	< 3	< 3	1	< 2	< 2	< 2	< 2
Upper	Downgradient	G41S	Arsenic, Dissolved	ug/l	G1, GMZ	2	7	< 2	12	4.3	9.4	< 2	6.6	14	16	13	24	21	18	24	18	26	16	22
Upper	Downgradient	G50S	Arsenic, Dissolved	ug/l	G1, GMZ	2																		
Upper	Downgradient	G51S	Arsenic, Dissolved	ug/l	G1, GMZ	2																		
Upper	Compliance	G52S	Arsenic, Dissolved	ug/L	G1, GMZ	2																		
Upper	Compliance	G54S	Arsenic, Dissolved	ug/L	G1, GMZ	2																		
Upper	Downgradient	R03S	Arsenic, Dissolved	ug/l	G1, GMZ	2	13	11	12	9.9	4.8	6.66	8.1		3.5	4.1	6.8	7.5	10	9.5	11	14	14	8.2
Upper	Downgradient	R42S	Arsenic, Dissolved	ug/l	G1, GMZ	2	40	23	7.8	51	13	25			19	23	11	19	21	22	26	37	28	21
Upper	Downgradient	G119	Arsenic, total	ug/l	GMZ	10																		47
Upper	Downgradient	G130	Arsenic, total	ug/l	GMZ	10																		16
Upper	Downgradient	G15S	Arsenic, total	ug/l	GMZ	10		7				< 2				37				110				< 10
Upper	Downgradient	G17S	Arsenic, total	ug/l	GMZ	10		< 2				< 2				3.1				6.4				< 10
Upper	Downgradient	G18S	Arsenic, total	ug/l	GMZ	10		< 2				4.44				7.7				K 85				
Upper	Downgradient	G33S	Arsenic, total	ug/l	GMZ	10																		< 10
Upper	Downgradient	G34S	Arsenic, total	ug/l	GMZ	10										11				110				16
Upper	Downgradient	G35S	Arsenic, total	ug/l	GMZ	10										100				45				48
Upper	Downgradient	G37S	Arsenic, total	ug/l	GMZ	10		< 2				3.77				6.7				8.2				< 10
Upper	Downgradient	G40S	Arsenic, total	ug/l	GMZ	10		0				< 2				29				48				16
Upper	Downgradient	G41S	Arsenic, total	ug/l	GMZ	10		16				< 2				26				41				30
Upper	Downgradient	G50S	Arsenic, total	ug/l	GMZ	10																		
Upper	Downgradient	G51S	Arsenic, total	ug/l	GMZ	10																		
Upper	Compliance	G52S	Arsenic, total	ug/L	GMZ	10																		
Upper	Compliance	G54S	Arsenic, total	ug/L	GMZ	10																		
Upper	Downgradient	R03S	Arsenic, total	ug/l	GMZ	10		17				4.88				40				55				25
Upper	Downgradient	R42S	Arsenic, total	ug/l	GMZ	10		21				34				96				22				21
Upper	Downgradient	G119	Barium, total	ug/l	GMZ	225180.6																		510
Upper	Downgradient	G130	Barium, total	ug/l	GMZ	225180.6																		640
Upper	Downgradient	G15S	Barium, total	ug/l	GMZ	225180.6		460				379				380				460				290
Upper	Downgradient	G17S	Barium, total	ug/l	GMZ	225180.6		66				81.6				120				190				140
Upper	Downgradient	G18S	Barium, total	ug/l	GMZ	225180.6		220				248				310				K 1000				
Upper	Downgradient	G33S	Barium, total	ug/l	GMZ	225180.6																		130
Upper	Downgradient	G34S	Barium, total	ug/l	GMZ	225180.6										370				1000				310
Upper	Downgradient	G35S	Barium, total	ug/l	GMZ	225180.6										1000				630				790
Upper	Downgradient	G37S	Barium, total	ug/l	GMZ	225180.6		110				96.8				140				140				74
Upper	Downgradient	G40S	Barium, total	ug/l	GMZ	225180.6		0				510				490				570				300
Upper	Downgradient	G41S	Barium, total	ug/l	GMZ	225180.6		500				338				730				470				520
Upper	Downgradient	G50S	Barium, total	ug/l	GMZ	225180.6																		
Upper	Downgradient	G51S	Barium, total	ug/l	GMZ	225180.6																		
Upper	Compliance	G52S	Barium, total	ug/L	GMZ	225180.6																		
Upper	Compliance	G54S	Barium, total	ug/L	GMZ	225180.6																		
Upper	Downgradient	R03S	Barium, total	ug/l	GMZ	225180.6		550				383				640				1200				670
Upper	Downgradient	R42S	Barium, total	ug/l	GMZ	225180.6		640				501				1800				740				900

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Upper	Downgradient	G119	Boron, Dissolved	ug/l	G1, GMZ	98																		< 98
Upper	Downgradient	G130	Boron, Dissolved	ug/l	G1, GMZ	98																		< 98
Upper	Downgradient	G15S	Boron, Dissolved	ug/l	G1, GMZ	98	370	380	420	370	376	354	380	360	480	360	440	430	470	430	370	400		380
Upper	Downgradient	G17S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	29	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Upper	Downgradient	G18S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	150	130	< 110	208	410	290	180	120	170	560	1200	K 1800				
Upper	Downgradient	G33S	Boron, Dissolved	ug/l	G1, GMZ	98																		< 98
Upper	Downgradient	G34S	Boron, Dissolved	ug/l	G1, GMZ	98									140	150	160	140	140	110				< 98
Upper	Downgradient	G35S	Boron, Dissolved	ug/l	G1, GMZ	98									< 100	< 100	< 100	140	160	DA 180				< 98
Upper	Downgradient	G37S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	< 110	< 110	< 110	< 110	< 100	29	< 100	< 100	< 100	< 100	< 100	< 98	< 98	< 98	< 98	< 98
Upper	Downgradient	G40S	Boron, Dissolved	ug/l	G1, GMZ	98	160		140	230	241	224	180	180	190	180	140	140	160	160	140	130	130	150
Upper	Downgradient	G41S	Boron, Dissolved	ug/l	G1, GMZ	98	960	970	1000	980	820	509	1100	1100	1300	1200	530	510	300	250	690	550	500	560
Upper	Downgradient	G50S	Boron, Dissolved	ug/l	G1, GMZ	98																		
Upper	Downgradient	G51S	Boron, Dissolved	ug/l	G1, GMZ	98																		
Upper	Compliance	G52S	Boron, Dissolved	ug/L	G1, GMZ	98																		
Upper	Compliance	G54S	Boron, Dissolved	ug/L	G1, GMZ	98																		
Upper	Downgradient	R03S	Boron, Dissolved	ug/l	G1, GMZ	98	180	160	130	120	110	144	150		120	120	130	760	850	720	1100	1100	840	910
Upper	Downgradient	R42S	Boron, Dissolved	ug/l	G1, GMZ	98	< 110	< 110	110	< 110	< 110	78.4			120	< 100	120	130	130	< 98	99	110	120	< 98
Upper	Downgradient	G119	Boron, total	ug/l	GMZ	200																		< 100
Upper	Downgradient	G130	Boron, total	ug/l	GMZ	200																		< 100
Upper	Downgradient	G15S	Boron, total	ug/l	GMZ	200		400				366				370				440				350
Upper	Downgradient	G17S	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Upper	Downgradient	G18S	Boron, total	ug/l	GMZ	200		< 110				241				150				K 1700				
Upper	Downgradient	G33S	Boron, total	ug/l	GMZ	200																		< 100
Upper	Downgradient	G34S	Boron, total	ug/l	GMZ	200										170				220				< 100
Upper	Downgradient	G35S	Boron, total	ug/l	GMZ	200										140				130				110
Upper	Downgradient	G37S	Boron, total	ug/l	GMZ	200		< 110				< 110				< 98				< 98				< 100
Upper	Downgradient	G40S	Boron, total	ug/l	GMZ	200		0				278				230				220				130
Upper	Downgradient	G41S	Boron, total	ug/l	GMZ	200		960				541				1200				270				500
Upper	Downgradient	G50S	Boron, total	ug/l	GMZ	200																		
Upper	Downgradient	G51S	Boron, total	ug/l	GMZ	200																		
Upper	Compliance	G52S	Boron, total	ug/L	GMZ	200																		
Upper	Compliance	G54S	Boron, total	ug/L	GMZ	200																		
Upper	Downgradient	R03S	Boron, total	ug/l	GMZ	200		160				151				190				810				840
Upper	Downgradient	R42S	Boron, total	ug/l	GMZ	200		< 110				73.6				180				100				< 100
Upper	Downgradient	G119	Chloride, Dissolved	mg/l	G1, GMZ	87.511																		23
Upper	Downgradient	G130	Chloride, Dissolved	mg/l	G1, GMZ	87.511																		16
Upper	Downgradient	G15S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	474	325	473	403	398	485	410	310	340	570	350	350	410	480	410	360		310
Upper	Downgradient	G17S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	63	30.3	52.1	49.8	64.3	140	65	< 0.014	50	58	29	43	61	78	24	38	57	30
Upper	Downgradient	G18S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	372	51.2	57.1	82	102	154	100	1000	51	63	30	520	480	750				
Upper	Downgradient	G33S	Chloride, Dissolved	mg/l	G1, GMZ	87.511																		9.2
Upper	Downgradient	G34S	Chloride, Dissolved	mg/l	G1, GMZ	87.511									96	110	100	77	54	47				32
Upper	Downgradient	G35S	Chloride, Dissolved	mg/l	G1, GMZ	87.511									41	35	39	74	71	68				33
Upper	Downgradient	G37S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	12.1	7.2	9.6	18.6	12.9	11.5	12	45	22	29	26	25	54	61	41	34	28	35
Upper	Downgradient	G40S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	151		138	190	198	176	110	110	100	120	84	100	120	15	100	80	95	87
Upper	Downgradient	G41S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	431	298	486	406	422	273	500	520	540	500	230	230	100	130	370	240	230	240
Upper	Downgradient	G50S	Chloride, Dissolved	mg/l	G1, GMZ	87.511																		
Upper	Downgradient	G51S	Chloride, Dissolved	mg/l	G1, GMZ	87.511																		
Upper	Compliance	G52S	Chloride, Dissolved	mg/L	G1, GMZ	87.511																		
Upper	Compliance	G54S	Chloride, Dissolved	mg/L	G1, GMZ	87.511																		
Upper	Downgradient	R03S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	94.3	59.5	70.9	77.3	106	125	69		95	61	160	360	320	380	410	460	380	400
Upper	Downgradient	R42S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	201	124	172	159	237	286			< 2	130	150	28	160	120	89	100	97	90
Upper	Downgradient	G119	Chloride, total	mg/l	GMZ	87.51186																		23
Upper	Downgradient	G130	Chloride, total	mg/l	GMZ	87.51186																		16
Upper	Downgradient	G15S	Chloride, total	mg/l	GMZ	87.51186		324				478				20				450				310
Upper	Downgradient	G17S	Chloride, total	mg/l	GMZ	87.51186		31.6				138				55				76				30
Upper	Downgradient	G18S	Chloride, total	mg/l	GMZ	87.51186		55.3				158				63				610				
Upper	Downgradient	G33S	Chloride, total	mg/l	GMZ	87.51186																		12
Upper	Downgradient	G34S	Chloride, total	mg/l	GMZ	87.51186										100				54				32
Upper	Downgradient	G35S	Chloride, total	mg/l	GMZ	87.51186										36				46				32
Upper	Downgradient	G37S	Chloride, total	mg/l	GMZ	87.51186		7.2				12				32				60				35
Upper	Downgradient	G40S	Chloride, total	mg/l	GMZ	87.51186						171				100				5.5				87
Upper	Downgradient	G41S	Chloride, total	mg/l	GMZ	87.51186		332				338				520				130				240
Upper	Downgradient	G50S	Chloride, total	mg/l	GMZ	87.51186																		
Upper	Downgradient	G51S	Chloride, total	mg/l	GMZ	87.51186																		
Upper	Compliance	G52S	Chloride, total	mg/L	GMZ	87.51186																		
Upper	Compliance	G54S	Chloride, total	mg/L	GMZ	87.51186																		
Upper	Downgradient	R03S	Chloride, total	mg/l	GMZ	87.51186		61.8				123				57				360				410
Upper	Downgradient	R42S	Chloride, total	mg/l	GMZ	87.51186		123				288				120				120				91

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Upper	Downgradient	G119	Ethylbenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G130	Ethylbenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G15S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G17S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G18S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				5.2				
Upper	Downgradient	G33S	Ethylbenzene	ug/l	G2, GMZ	5																		< 1
Upper	Downgradient	G34S	Ethylbenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G35S	Ethylbenzene	ug/l	G2, GMZ	5										< 1				< 1				< 1
Upper	Downgradient	G37S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G40S	Ethylbenzene	ug/l	G2, GMZ	5						< 5				< 1				< 1				< 1
Upper	Downgradient	G41S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G50S	Ethylbenzene	ug/l	G2, GMZ	5																		
Upper	Downgradient	G51S	Ethylbenzene	ug/l	G2, GMZ	5																		
Upper	Compliance	G52S	Ethylbenzene	ug/L	G2, GMZ	5																		
Upper	Compliance	G54S	Ethylbenzene	ug/L	G2, GMZ	5																		
Upper	Downgradient	R03S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	R42S	Ethylbenzene	ug/l	G2, GMZ	5		< 5				< 5				< 1				< 1				< 1
Upper	Downgradient	G119	Fluoride, total	mg/l	GMZ	273.35																		0.49
Upper	Downgradient	G130	Fluoride, total	mg/l	GMZ	273.35																		0.5
Upper	Downgradient	G15S	Fluoride, total	mg/l	GMZ	273.35		0.11				0.106				0.65				< 0.1				0.48
Upper	Downgradient	G17S	Fluoride, total	mg/l	GMZ	273.35		< 0.1				< 0.1				< 0.1				< 0.1				0.51
Upper	Downgradient	G18S	Fluoride, total	mg/l	GMZ	273.35		0.15				0.123				0.66				2.2				
Upper	Downgradient	G33S	Fluoride, total	mg/l	GMZ	273.35																		0.49
Upper	Downgradient	G34S	Fluoride, total	mg/l	GMZ	273.35										< 0.1				0.47				0.47
Upper	Downgradient	G35S	Fluoride, total	mg/l	GMZ	273.35										0.12				0.47				0.45
Upper	Downgradient	G37S	Fluoride, total	mg/l	GMZ	273.35		< 0.1				< 0.1				< 0.1				< 0.1				0.49
Upper	Downgradient	G40S	Fluoride, total	mg/l	GMZ	273.35						0.102				0.76				< 0.1				0.47
Upper	Downgradient	G41S	Fluoride, total	mg/l	GMZ	273.35		0.18				0.192				0.69				< 0.1				0.51
Upper	Downgradient	G50S	Fluoride, total	mg/l	GMZ	273.35																		
Upper	Downgradient	G51S	Fluoride, total	mg/l	GMZ	273.35																		
Upper	Compliance	G52S	Fluoride, total	mg/L	GMZ	273.35																		
Upper	Compliance	G54S	Fluoride, total	mg/L	GMZ	273.35																		
Upper	Downgradient	R03S	Fluoride, total	mg/l	GMZ	273.35		0.12				0.106				0.71				< 0.1				0.58
Upper	Downgradient	R42S	Fluoride, total	mg/l	GMZ	273.35		< 0.1				< 0.1				0.81				0.61				0.42
Upper	Downgradient	G119	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																		7.8
Upper	Downgradient	G130	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																		4.2
Upper	Downgradient	G15S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.084	0.06	< 0.2	< 0.05	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	4		7.9
Upper	Downgradient	G17S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	13.3	5.46	10.9	< 0.1	< 0.1	7.13	20	25	17	4.1	3.3	6.7	4.8	1.7	0.92	5.5	7.7	1.1
Upper	Downgradient	G18S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.4	6.51	5.03	3.22	0.3	13.1	7.5	4.3	18	5.9	< 0.2	< 0.2	0.63	< 0.2				
Upper	Downgradient	G33S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																		2.2
Upper	Downgradient	G34S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74									1.8	1.2	1.1	4.8	6.2	5.7				6.7
Upper	Downgradient	G35S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74									4.7	4.4	0.57	0.38	0.43	4.8				1.1
Upper	Downgradient	G37S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.55	5.44	0.22	< 0.1	8.39	1.13	6.2	4.7	5.5	5.8	5.8	6.8	3.4	2.7	1.6	4.7	5.7	2.7
Upper	Downgradient	G40S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.89		1.89	0.36	< 0.1	0.238	1.6	0.43	0.88	1.2	2.1	1.1	1	0.89	2.3	3.2	2.3	2.6
Upper	Downgradient	G41S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.44	< 0.1	< 0.1	< 0.1	< 0.1	0.182	0.16	0.065	< 1	< 0.05	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1.5	< 0.2	< 0.2
Upper	Downgradient	G50S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																		
Upper	Downgradient	G51S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																		
Upper	Compliance	G52S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																		
Upper	Compliance	G54S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																		
Upper	Downgradient	R03S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.235	0.3		0.5	0.088	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.42	4.9	< 0.2
Upper	Downgradient	R42S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.1	< 0.1	0.35	< 0.1	< 0.1	0.118			< 0.2	< 0.05	3.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Upper	Downgradient	G119	Nitrate as N, total	mg/l	GMZ	11.7389																		7.8
Upper	Downgradient	G130	Nitrate as N, total	mg/l	GMZ	11.7389																		4.3
Upper	Downgradient	G15S	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				< 0.1				< 0.05				< 0.2				< 0.2
Upper	Downgradient	G17S	Nitrate as N, total	mg/l	GMZ	11.7389		5.53				7.95				1.7				1.8				1.1
Upper	Downgradient	G18S	Nitrate as N, total	mg/l	GMZ	11.7389		6.66				14.1				6.4				< 0.2				
Upper	Downgradient	G33S	Nitrate as N, total	mg/l	GMZ	11.7389																		3.7
Upper	Downgradient	G34S	Nitrate as N, total	mg/l	GMZ	11.7389										1.6				5.1				6.7
Upper	Downgradient	G35S	Nitrate as N, total	mg/l	GMZ	11.7389										3.6				1.1				4.4
Upper	Downgradient	G37S	Nitrate as N, total	mg/l	GMZ	11.7389		5.7				5.27				3.9				2.7				2.8
Upper	Downgradient	G40S	Nitrate as N, total	mg/l	GMZ	11.7389						0.264				1.2				0.82				2.4
Upper	Downgradient	G41S	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				< 0.1				< 0.05				< 0.2				< 0.2
Upper	Downgradient	G50S	Nitrate as N, total	mg/l	GMZ	11.7389																		
Upper	Downgradient	G51S	Nitrate as N, total	mg/l	GMZ	11.7389																		
Upper	Compliance	G52S	Nitrate as N, total	mg/L	GMZ	11.7389																		
Upper	Compliance	G54S	Nitrate as N, total	mg/L	GMZ	11.7389																		
Upper	Downgradient	R03S	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				< 0.1				0.078				< 0.2				< 0.2
Upper	Downgradient	R42S	Nitrate as N, total	mg/l	GMZ	11.7389		< 0.1				0.138				< 0.05				< 0.2				< 0.2

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01	2ndQtr01
Upper	Downgradient	G119	Potassium, total	mg/l	GMZ	29.00582																		12
Upper	Downgradient	G130	Potassium, total	mg/l	GMZ	29.00582																		7.9
Upper	Downgradient	G15S	Potassium, total	mg/l	GMZ	29.00582		57				60.9				56				60				59
Upper	Downgradient	G17S	Potassium, total	mg/l	GMZ	29.00582		2				3.61				6.4				10				6.1
Upper	Downgradient	G18S	Potassium, total	mg/l	GMZ	29.00582		7.3				15.9				15				K 69				
Upper	Downgradient	G33S	Potassium, total	mg/l	GMZ	29.00582																		3.3
Upper	Downgradient	G34S	Potassium, total	mg/l	GMZ	29.00582										17				31				11
Upper	Downgradient	G35S	Potassium, total	mg/l	GMZ	29.00582										24				21				20
Upper	Downgradient	G37S	Potassium, total	mg/l	GMZ	29.00582		2.7				2.51				12				12				5.1
Upper	Downgradient	G40S	Potassium, total	mg/l	GMZ	29.00582						30.2				30				16				18
Upper	Downgradient	G41S	Potassium, total	mg/l	GMZ	29.00582		84				54.8				100				33				52
Upper	Downgradient	G50S	Potassium, total	mg/l	GMZ	29.00582																		
Upper	Downgradient	G51S	Potassium, total	mg/l	GMZ	29.00582																		
Upper	Compliance	G52S	Potassium, total	mg/L	GMZ	29.00582																		
Upper	Compliance	G54S	Potassium, total	mg/L	GMZ	29.00582																		
Upper	Downgradient	R03S	Potassium, total	mg/l	GMZ	29.00582		18				14				23				87				91
Upper	Downgradient	R42S	Potassium, total	mg/l	GMZ	29.00582		3.4				3.74				18				2.5				1.2
Upper	Downgradient	G119	Sodium, total	mg/l	GMZ	164.7897																		8.8
Upper	Downgradient	G130	Sodium, total	mg/l	GMZ	164.7897																		7.2
Upper	Downgradient	G15S	Sodium, total	mg/l	GMZ	164.7897		170				175				170				190				130
Upper	Downgradient	G17S	Sodium, total	mg/l	GMZ	164.7897		18				27.2				30				23				10
Upper	Downgradient	G18S	Sodium, total	mg/l	GMZ	164.7897		55				76.1				41				K 350				
Upper	Downgradient	G33S	Sodium, total	mg/l	GMZ	164.7897																		6.1
Upper	Downgradient	G34S	Sodium, total	mg/l	GMZ	164.7897										48				32				14
Upper	Downgradient	G35S	Sodium, total	mg/l	GMZ	164.7897										20				24				22
Upper	Downgradient	G37S	Sodium, total	mg/l	GMZ	164.7897		4.7				4.56				6.1				11				7
Upper	Downgradient	G40S	Sodium, total	mg/l	GMZ	164.7897						89.1				63				63				44
Upper	Downgradient	G41S	Sodium, total	mg/l	GMZ	164.7897		190				116				280				51				120
Upper	Downgradient	G50S	Sodium, total	mg/l	GMZ	164.7897																		
Upper	Downgradient	G51S	Sodium, total	mg/l	GMZ	164.7897																		
Upper	Compliance	G52S	Sodium, total	mg/L	GMZ	164.7897																		
Upper	Compliance	G54S	Sodium, total	mg/L	GMZ	164.7897																		
Upper	Downgradient	R03S	Sodium, total	mg/l	GMZ	164.7897		37				44.7				43				160				160
Upper	Downgradient	R42S	Sodium, total	mg/l	GMZ	164.7897		43				71.8				72				55				54
Upper	Downgradient	G119	Tetrahydrofuran	ug/l	G2, GMZ	42																		< 5
Upper	Downgradient	G130	Tetrahydrofuran	ug/l	G2, GMZ	42																		< 5
Upper	Downgradient	G15S	Tetrahydrofuran	ug/l	G2, GMZ	42		51				39				34				29				22
Upper	Downgradient	G17S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Upper	Downgradient	G18S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				21				< 5				240				
Upper	Downgradient	G33S	Tetrahydrofuran	ug/l	G2, GMZ	42																		< 5
Upper	Downgradient	G34S	Tetrahydrofuran	ug/l	G2, GMZ	42										< 5				< 5				< 5
Upper	Downgradient	G35S	Tetrahydrofuran	ug/l	G2, GMZ	42										< 5				< 5				< 5
Upper	Downgradient	G37S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				< 5				< 5
Upper	Downgradient	G40S	Tetrahydrofuran	ug/l	G2, GMZ	42						< 5				< 5				< 5				< 5
Upper	Downgradient	G41S	Tetrahydrofuran	ug/l	G2, GMZ	42		23				26				48				5.9				13
Upper	Downgradient	G50S	Tetrahydrofuran	ug/l	G2, GMZ	42																		
Upper	Downgradient	G51S	Tetrahydrofuran	ug/l	G2, GMZ	42																		
Upper	Compliance	G52S	Tetrahydrofuran	ug/L	G2, GMZ	42																		
Upper	Compliance	G54S	Tetrahydrofuran	ug/L	G2, GMZ	42																		
Upper	Downgradient	R03S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 5				< 5				< 5				29				28
Upper	Downgradient	R42S	Tetrahydrofuran	ug/l	G2, GMZ	42		10				6				< 5				< 5				< 5

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Bedrock	Upgradient	G09D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G13D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Upgradient	G13S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Downgradient	G14D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Downgradient	G16D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G20D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Downgradient	G41D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G13D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Upgradient	G13S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Downgradient	G14D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Downgradient	G16D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G20D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Downgradient	G41D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				4				6	11				7	3		
Bedrock	Upgradient	G09M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G13D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				3	4	2	2	4	4		3	
Bedrock	Upgradient	G13S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Downgradient	G14D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				25				15	13				11	12		
Bedrock	Downgradient	G16D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G20D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Downgradient	G41D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.2	0.28	0.21	0.13	0.32	0.5	0.29	0.087		0.24	0.099	0.065	< 0.05		< 0.09	
Bedrock	Upgradient	G09M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.14	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		0.58	3.5	3.5	0.48		1.2	2.9
Bedrock	Upgradient	G13D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	A 0.49	0.36	0.064	0.18	< 0.05	< 0.05	0.057	< 0.05		0.16	0.19	0.084	0.064		< 0.09	
Bedrock	Upgradient	G13S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	A 0.35	< 0.05	0.39	< 0.05	0.5	0.26	0.36	0.76		0.38	0.5	< 0.05	0.094		0.14	
Bedrock	Downgradient	G14D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	A 1.2	0.89	0.93	1.8	1.6	0.98	0.51	0.1		0.92	0.99	0.69	0.28		1.2	1.7
Bedrock	Downgradient	G16D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.6	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Bedrock	Upgradient	G20D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Bedrock	Downgradient	G41D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	37	31	1.2	14	0.085	< 0.05	< 0.05	0.32		0.13	< 0.05	< 0.05	< 0.05		< 0.09	
Bedrock	Upgradient	G09D	Ammonia as N, total	mg/l	GMZ	900				0.19				0.12					< 0.05			
Bedrock	Upgradient	G09M	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.11					0.43			
Bedrock	Upgradient	G13D	Ammonia as N, total	mg/l	GMZ	900				0.19				0.15		0.15	0.13	0.1	0.052		< 0.09	
Bedrock	Upgradient	G13S	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.67		0.38	0.58	< 0.05	0.059		0.15	
Bedrock	Downgradient	G14D	Ammonia as N, total	mg/l	GMZ	900				2				66					0.29			
Bedrock	Downgradient	G16D	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.11					< 0.05			
Bedrock	Upgradient	G20D	Ammonia as N, total	mg/l	GMZ	900				< 0.05				< 0.05					< 0.05			
Bedrock	Downgradient	G41D	Ammonia as N, total	mg/l	GMZ	900				16				0.24					< 0.05			
Bedrock	Upgradient	G09D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	1	1	< 1	< 1	< 1		< 1	< 1	< 1	1.9		< 1	
Bedrock	Upgradient	G09M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		1.4	
Bedrock	Upgradient	G13D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	2	< 1	< 1	1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Upgradient	G13S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	2	1	6	2.6		3	2	1.6	1.8		1.3	
Bedrock	Downgradient	G14D	Arsenic, Dissolved	ug/l	G1, GMZ	2	32	11	7	14	4	10	5.4	10		11	6.1	3.9	20	3.9	7.3	
Bedrock	Downgradient	G16D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Upgradient	G20D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Downgradient	G41D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Bedrock	Upgradient	G09D	Arsenic, total	ug/l	GMZ	10				1				1					2			
Bedrock	Upgradient	G09M	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Bedrock	Upgradient	G13D	Arsenic, total	ug/l	GMZ	10				< 1				< 1		< 1	< 1	1.2	< 1		1	
Bedrock	Upgradient	G13S	Arsenic, total	ug/l	GMZ	10				< 1				1.9		1.8	3.4	2.4	1.6		2.4	
Bedrock	Downgradient	G14D	Arsenic, total	ug/l	GMZ	10				12				18	12				5.7			
Bedrock	Downgradient	G16D	Arsenic, total	ug/l	GMZ	10				< 1				< 1					1.6			
Bedrock	Upgradient	G20D	Arsenic, total	ug/l	GMZ	10				< 1				< 1					1.2			
Bedrock	Downgradient	G41D	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Bedrock	Upgradient	G09D	Barium, total	ug/l	GMZ	225180.6				350				440					440			
Bedrock	Upgradient	G09M	Barium, total	ug/l	GMZ	225180.6				130				120					110			
Bedrock	Upgradient	G13D	Barium, total	ug/l	GMZ	225180.6				160				170		160	160	160	140		150	
Bedrock	Upgradient	G13S	Barium, total	ug/l	GMZ	225180.6				240				170		200	160	170	190		220	
Bedrock	Downgradient	G14D	Barium, total	ug/l	GMZ	225180.6				700				840					540			
Bedrock	Downgradient	G16D	Barium, total	ug/l	GMZ	225180.6				86				94					120			
Bedrock	Upgradient	G20D	Barium, total	ug/l	GMZ	225180.6				94				89					89			
Bedrock	Downgradient	G41D	Barium, total	ug/l	GMZ	225180.6				82				50					60			
Bedrock	Upgradient	G09D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	40	49	55	57	64	40	55		32	52	29	35		62	
Bedrock	Upgradient	G09M	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	40	38	33	39	37	30	21		14	43	33	27		31	
Bedrock	Upgradient	G13D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	120	140	95	110	120	80	90		83	79	88	63		65	
Bedrock	Upgradient	G13S	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	140	250	83	120	140	120	120		110	130	88	100	100	82	
Bedrock	Downgradient	G14D	Boron, Dissolved	ug/l	G1, GMZ	98	120	160	140	120	110	120	110	110		84	110	90	98		91	
Bedrock	Downgradient	G16D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	23	32	21	24	21	20	13		< 10	21	< 10	< 10		14	
Bedrock	Upgradient	G20D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	21	26	25	39	29	40	18		11	26	< 10	15		24	
Bedrock	Downgradient	G41D	Boron, Dissolved	ug/l	G1, GMZ	98	230	220	12	100	31	14	10	18		10	26	< 10	< 10		12	
Bedrock	Upgradient	G09D	Boron, total	ug/l	GMZ	200				45				39					30			
Bedrock	Upgradient	G09M	Boron, total	ug/l	GMZ	200				33				20					41			
Bedrock	Upgradient	G13D	Boron, total	ug/l	GMZ	200				89				78		95	79	150	68		68	
Bedrock	Upgradient	G13S	Boron, total	ug/l	GMZ	200				84				120		110	120	200	98		88	
Bedrock	Downgradient	G14D	Boron, total	ug/l	GMZ	200				100				97					110			
Bedrock	Downgradient	G16D	Boron, total	ug/l	GMZ	200				17				11					< 10			
Bedrock	Upgradient	G20D	Boron, total	ug/l	GMZ	200				28				21					40			
Bedrock	Downgradient	G41D	Boron, total	ug/l	GMZ	200				110				13					< 10			
Bedrock	Upgradient	G09D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	68	52	10	33	54	26	24	170		26	26	40	51		22	
Bedrock	Upgradient	G09M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	180	160	160	180	37	140	160	170		200	190	190	220	250	250	
Bedrock	Upgradient	G13D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	64	74	69	59	37	30	51	38		70	68	59	86		93	100
Bedrock	Upgradient	G13S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	69	40	79	Q 43	42	31	36	39		39	43	46	38		60	
Bedrock	Downgradient	G14D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	41	38	38	32	63	51	41	40		37	41	32	41		38	
Bedrock	Downgradient	G16D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	8.4	7.3	7.4	7.7	7.2	7.4	8.2	9.4		9.1	12	10	10		11	
Bedrock	Upgradient	G20D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	20	17	15	18	20	26	29	28		22	35	27	32		24	
Bedrock	Downgradient	G41D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	95	62	36	36	17	13	16	20		17	28	23	24		17	
Bedrock	Upgradient	G09D	Chloride, total	mg/l	GMZ	87.51186				33				170	69				49			
Bedrock	Upgradient	G09M	Chloride, total	mg/l	GMZ	87.51186				190				170	170				220	220		
Bedrock	Upgradient	G13D	Chloride, total	mg/l	GMZ	87.51186				59				60		66	76	61	85		92	
Bedrock	Upgradient	G13S	Chloride, total	mg/l	GMZ	87.51186				50				32		38	43	49	33		70	
Bedrock	Downgradient	G14D	Chloride, total	mg/l	GMZ	87.51186				35				42					36			
Bedrock	Downgradient	G16D	Chloride, total	mg/l	GMZ	87.51186				7.3				9.2					10			
Bedrock	Upgradient	G20D	Chloride, total	mg/l	GMZ	87.51186				18				29					34			
Bedrock	Downgradient	G41D	Chloride, total	mg/l	GMZ	87.51186				38				18					23			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Bedrock	Upgradient	G09D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09M	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G13D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Upgradient	G13S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1		< 1	< 1	< 1	< 1		< 1	
Bedrock	Downgradient	G14D	Ethylbenzene	ug/l	G2, GMZ	5				7				< 1					< 1			
Bedrock	Downgradient	G16D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G20D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Downgradient	G41D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Bedrock	Upgradient	G09D	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Bedrock	Upgradient	G09M	Fluoride, total	mg/l	GMZ	273.35				0.91				0.79					< 0.25			
Bedrock	Upgradient	G13D	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25		< 0.25	< 0.25	< 2.5	< 0.25		< 0.25	
Bedrock	Upgradient	G13S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25		< 0.25	< 0.25	< 0.25	< 0.25		< 0.25	
Bedrock	Downgradient	G14D	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Bedrock	Downgradient	G16D	Fluoride, total	mg/l	GMZ	273.35				0.3				< 0.25					< 0.25			
Bedrock	Upgradient	G20D	Fluoride, total	mg/l	GMZ	273.35				0.25				< 0.25					< 0.25			
Bedrock	Downgradient	G41D	Fluoride, total	mg/l	GMZ	273.35				0.27				< 0.25					< 0.25			
Bedrock	Upgradient	G09D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.2	< 0.02	< 0.02	< 0.2	< 0.02	0.046	< 0.02	< 0.02		0.044	0.042	0.13	< 0.02		0.05	
Bedrock	Upgradient	G09M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.2	0.025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.048		< 0.02	< 0.2	3.9	0.057		< 0.02	
Bedrock	Upgradient	G13D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.49	0.36	4.1	1.1	1.6	4	< 0.02	0.055		0.25	0.03	< 0.02	0.06		0.11	
Bedrock	Upgradient	G13S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.2	5	0.42	Q 6.1	< 0.02	0.28	< 0.02	0.075		0.049	0.034	0.24	< 0.02		< 0.02	
Bedrock	Downgradient	G14D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.2	< 0.02	< 0.1	0.05	< 0.02	< 0.02	< 0.02	< 0.02		0.048	0.031	< 0.02	0.041		0.071	
Bedrock	Downgradient	G16D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	3	2.1	2.3	2.4	2.1	2.2	2.6	2.5		3.1	3.8	H 2.1	3.6		3.4	
Bedrock	Upgradient	G20D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	3.6	4	3.6	3.7	4.4	5	5.2	4.5		0.43	6	4.6	4.8		5.1	
Bedrock	Downgradient	G41D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	2	2.9	Q 18	3.4	5.5	5.4	5.2	6.8		4.6	8.8	7.2	8.6		5	
Bedrock	Upgradient	G09D	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.2				< 0.02					< 0.02			
Bedrock	Upgradient	G09M	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				0.054					0.047			
Bedrock	Upgradient	G13D	Nitrate as N, total	mg/l	GMZ	11.7389				1.4				0.054		0.24	< 0.02	< 0.02	0.05		0.076	
Bedrock	Upgradient	G13S	Nitrate as N, total	mg/l	GMZ	11.7389				6.9				0.078		0.048	< 0.02	0.17	0.068		< 0.02	
Bedrock	Downgradient	G14D	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				< 0.02					< 0.02			
Bedrock	Downgradient	G16D	Nitrate as N, total	mg/l	GMZ	11.7389				2.6				2.8					3.6			
Bedrock	Upgradient	G20D	Nitrate as N, total	mg/l	GMZ	11.7389				3.8				4.5					5			
Bedrock	Downgradient	G41D	Nitrate as N, total	mg/l	GMZ	11.7389				4.9				6.2					8.2			
Bedrock	Upgradient	G09D	Potassium, total	mg/l	GMZ	29.00582				0.64				1					0.57			
Bedrock	Upgradient	G09M	Potassium, total	mg/l	GMZ	29.00582				0.6				0.68					0.76			
Bedrock	Upgradient	G13D	Potassium, total	mg/l	GMZ	29.00582				11				10		9	6.1	9.8	4.7		5.4	
Bedrock	Upgradient	G13S	Potassium, total	mg/l	GMZ	29.00582				23				11		11	10	9.2	10		8.6	
Bedrock	Downgradient	G14D	Potassium, total	mg/l	GMZ	29.00582				2.4				2.7					3.4			
Bedrock	Downgradient	G16D	Potassium, total	mg/l	GMZ	29.00582				0.92				1.1					2.1			
Bedrock	Upgradient	G20D	Potassium, total	mg/l	GMZ	29.00582				2.6				2.5					2.4			
Bedrock	Downgradient	G41D	Potassium, total	mg/l	GMZ	29.00582				6.5				1.3					1			
Bedrock	Upgradient	G09D	Sodium, total	mg/l	GMZ	164.7897				17				85					24			
Bedrock	Upgradient	G09M	Sodium, total	mg/l	GMZ	164.7897				65				68					74			
Bedrock	Upgradient	G13D	Sodium, total	mg/l	GMZ	164.7897				23				32		34	35	35	40		43	
Bedrock	Upgradient	G13S	Sodium, total	mg/l	GMZ	164.7897				18				22		22	24	36	33		42	
Bedrock	Downgradient	G14D	Sodium, total	mg/l	GMZ	164.7897				14				12					15			
Bedrock	Downgradient	G16D	Sodium, total	mg/l	GMZ	164.7897				4.1				4.4					4.6			
Bedrock	Upgradient	G20D	Sodium, total	mg/l	GMZ	164.7897				4.7				6.6					6.3			
Bedrock	Downgradient	G41D	Sodium, total	mg/l	GMZ	164.7897				17				6.3					8.1			
Bedrock	Upgradient	G09D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Bedrock	Upgradient	G09M	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Bedrock	Upgradient	G13D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5		< 5	< 5	< 5	< 5		< 5	
Bedrock	Upgradient	G13S	Tetrahydrofuran	ug/l	G2, GMZ	42				20				< 5		< 5	< 5	< 5	< 5		< 5	
Bedrock	Downgradient	G14D	Tetrahydrofuran	ug/l	G2, GMZ	42				5				< 5					< 5			
Bedrock	Downgradient	G16D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Bedrock	Upgradient	G20D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Bedrock	Downgradient	G41D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Lower	Downgradient	G03M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G16M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G18D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G33D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G34D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G35D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G36S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G37D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G38S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G39S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G41M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G52M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																
Lower	Compliance	G54M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																
Lower	Compliance	R39S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																
Lower	Downgradient	G03M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G16M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G18D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G33D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G34D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G35D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G36S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G37D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G38S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G39S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G41M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G52M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																
Lower	Compliance	G54M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																
Lower	Compliance	R39S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																
Lower	Downgradient	G03M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				2				< 1					< 1			
Lower	Downgradient	G16M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G18D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G33D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G34D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G35D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				2				< 1					< 1			
Lower	Downgradient	G36S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G37D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G38S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G39S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				3				4	4				3			
Lower	Downgradient	G41M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				4				< 1					< 1			
Lower	Compliance	G52M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																
Lower	Compliance	G54M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																
Lower	Compliance	R39S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																
Lower	Downgradient	G03M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	140	210	170	140	230	170	25	9.6		7.3	4.6	3.2	10		2.5	
Lower	Downgradient	G16M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	72	97	26	19	65	88	40	32		22	30	28	19		12	
Lower	Downgradient	G18D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Lower	Downgradient	G33D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.18	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Lower	Downgradient	G34D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		0.77	
Lower	Downgradient	G35D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	3.7	4.9	16	4.2	11	120	100	32		80	13	6.3	5.4		31	
Lower	Downgradient	G36S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	A 0.15	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Lower	Downgradient	G37D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.2	1	0.93	0.67	0.78	0.71	0.49	0.16		0.095	< 0.05	< 0.05	< 0.05		< 0.09	
Lower	Downgradient	G38S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	310	81	52	48	40	28	15	14		30	44	38	58		66	
Lower	Compliance	G39S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	9.2	7.9	7.6	7.48	7.6	9.1	5.8	7.4		8.4	7.4	6.7	5.8		8.4	
Lower	Downgradient	G41M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	110	130	150	140	190	180	100	11		36	1.2	0.31	0.15		36	
Lower	Compliance	G52M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																
Lower	Compliance	G54M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																
Lower	Compliance	R39S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Lower	Downgradient	G03M	Ammonia as N, total	mg/l	GMZ	900				140				8.6					2.9			
Lower	Downgradient	G16M	Ammonia as N, total	mg/l	GMZ	900				17				32					18			
Lower	Downgradient	G18D	Ammonia as N, total	mg/l	GMZ	900				< 0.05				< 0.05					< 0.05			
Lower	Downgradient	G33D	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.13					< 0.05			
Lower	Downgradient	G34D	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.15					<Q 0.05			
Lower	Downgradient	G35D	Ammonia as N, total	mg/l	GMZ	900				4.4				36					5.4			
Lower	Downgradient	G36S	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.14					< 0.05			
Lower	Downgradient	G37D	Ammonia as N, total	mg/l	GMZ	900				0.68				0.14					<Q 0.05			
Lower	Downgradient	G38S	Ammonia as N, total	mg/l	GMZ	900				46				12					58			
Lower	Compliance	G39S	Ammonia as N, total	mg/l	GMZ	900				6.731				7.3					5.8			
Lower	Downgradient	G41M	Ammonia as N, total	mg/l	GMZ	900				120				12					0.12			
Lower	Compliance	G52M	Ammonia as N, total	mg/L	GMZ	900																
Lower	Compliance	G54M	Ammonia as N, total	mg/L	GMZ	900																
Lower	Compliance	R39S	Ammonia as N, total	mg/L	GMZ	900																
Lower	Downgradient	G03M	Arsenic, Dissolved	ug/l	G1, GMZ	2	2.9	3	3	5	8	7	2.1	< 1		< 1	< 1	< 1	1.7		< 1	
Lower	Downgradient	G16M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	2	1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Lower	Downgradient	G18D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Lower	Downgradient	G33D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Lower	Downgradient	G34D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Lower	Downgradient	G35D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	1	1	2	1.8	< 1		3.1	2.6	< 1	< 1		2.1	
Lower	Downgradient	G36S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Lower	Downgradient	G37D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Lower	Downgradient	G38S	Arsenic, Dissolved	ug/l	G1, GMZ	2	4.8	4	3	6	4	2	1.5	1.7		1.9	1.8	1.6	3.4		4.2	
Lower	Compliance	G39S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		1.1	
Lower	Downgradient	G41M	Arsenic, Dissolved	ug/l	G1, GMZ	2	19	18	16	22	24	25	19	9.3		15	2.4	1.9	5.5		12	
Lower	Compliance	G52M	Arsenic, Dissolved	ug/L	G1, GMZ	2																
Lower	Compliance	G54M	Arsenic, Dissolved	ug/L	G1, GMZ	2																
Lower	Compliance	R39S	Arsenic, Dissolved	ug/L	G1, GMZ	2																
Lower	Downgradient	G03M	Arsenic, total	ug/l	GMZ	10				5				< 1					< 1			
Lower	Downgradient	G16M	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Lower	Downgradient	G18D	Arsenic, total	ug/l	GMZ	10				< 1				2.1					3.2			
Lower	Downgradient	G33D	Arsenic, total	ug/l	GMZ	10				< 1				< 1					21	5.6		
Lower	Downgradient	G34D	Arsenic, total	ug/l	GMZ	10				< 1				1.6					4			
Lower	Downgradient	G35D	Arsenic, total	ug/l	GMZ	10				2				1.5					5.7			
Lower	Downgradient	G36S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Lower	Downgradient	G37D	Arsenic, total	ug/l	GMZ	10				< 1				< 1					1.3			
Lower	Downgradient	G38S	Arsenic, total	ug/l	GMZ	10				5				1.3					3.1			
Lower	Compliance	G39S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Lower	Downgradient	G41M	Arsenic, total	ug/l	GMZ	10				23				17					32			
Lower	Compliance	G52M	Arsenic, total	ug/L	GMZ	10																
Lower	Compliance	G54M	Arsenic, total	ug/L	GMZ	10																
Lower	Compliance	R39S	Arsenic, total	ug/L	GMZ	10																
Lower	Downgradient	G03M	Barium, total	ug/l	GMZ	225180.6				310				170					130			
Lower	Downgradient	G16M	Barium, total	ug/l	GMZ	225180.6				280				380					350			
Lower	Downgradient	G18D	Barium, total	ug/l	GMZ	225180.6				45				61					62			
Lower	Downgradient	G33D	Barium, total	ug/l	GMZ	225180.6				85				92					170			
Lower	Downgradient	G34D	Barium, total	ug/l	GMZ	225180.6				38				55					100			
Lower	Downgradient	G35D	Barium, total	ug/l	GMZ	225180.6				400				180					260			
Lower	Downgradient	G36S	Barium, total	ug/l	GMZ	225180.6				150				190					180			
Lower	Downgradient	G37D	Barium, total	ug/l	GMZ	225180.6				43				45					51			
Lower	Downgradient	G38S	Barium, total	ug/l	GMZ	225180.6				1000				680					1100			
Lower	Compliance	G39S	Barium, total	ug/l	GMZ	225180.6				240				260					230			
Lower	Downgradient	G41M	Barium, total	ug/l	GMZ	225180.6				440				160					170			
Lower	Compliance	G52M	Barium, total	ug/L	GMZ	225180.6																
Lower	Compliance	G54M	Barium, total	ug/L	GMZ	225180.6																
Lower	Compliance	R39S	Barium, total	ug/L	GMZ	225180.6																

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Lower	Downgradient	G03M	Boron, Dissolved	ug/l	G1, GMZ	98	880	940	930	830	1200	1100	180	100		75	79	69	120		54	
Lower	Downgradient	G16M	Boron, Dissolved	ug/l	G1, GMZ	98	420	500	180	86	370	600	240	130		160	190	120	87		74	
Lower	Downgradient	G18D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	21	25	13	22	26	20	16		16	27	< 10	12		12	
Lower	Downgradient	G33D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	15	98	19	17	22	20	< 10		< 10	17	< 10	< 10		12	
Lower	Downgradient	G34D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	16	< 10	20	24	20	20	13		< 10	17	< 10	< 10		57	
Lower	Downgradient	G35D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	76	140	290	140	600	550	170		500	110	35	50		290	
Lower	Downgradient	G36S	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	32	< 10	13	23	20	20	12		< 10	27	< 10	< 10		17	
Lower	Downgradient	G37D	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	26	10	29	31	23	30	22		18	25	< 10	< 10		15	
Lower	Downgradient	G38S	Boron, Dissolved	ug/l	G1, GMZ	98	320	380	320	320	180	140	110	120		180	280	150	270		400	
Lower	Compliance	G39S	Boron, Dissolved	ug/l	G1, GMZ	98	140	130	150	140	150	140	140	130		150	160	110	110		130	
Lower	Downgradient	G41M	Boron, Dissolved	ug/l	G1, GMZ	98	600	610	650	680	790	850	580	81		300	56	17	25		360	
Lower	Compliance	G52M	Boron, Dissolved	ug/L	G1, GMZ	98																
Lower	Compliance	G54M	Boron, Dissolved	ug/L	G1, GMZ	98																
Lower	Compliance	R39S	Boron, Dissolved	ug/L	G1, GMZ	98																
Lower	Downgradient	G03M	Boron, total	ug/l	GMZ	200				800				85					68			
Lower	Downgradient	G16M	Boron, total	ug/l	GMZ	200				74				130					71			
Lower	Downgradient	G18D	Boron, total	ug/l	GMZ	200				27				16					13			
Lower	Downgradient	G33D	Boron, total	ug/l	GMZ	200				27				< 10					10			
Lower	Downgradient	G34D	Boron, total	ug/l	GMZ	200				17				12					14			
Lower	Downgradient	G35D	Boron, total	ug/l	GMZ	200				270				150					50			
Lower	Downgradient	G36S	Boron, total	ug/l	GMZ	200				17				12					< 10			
Lower	Downgradient	G37D	Boron, total	ug/l	GMZ	200				28				24					< 10			
Lower	Downgradient	G38S	Boron, total	ug/l	GMZ	200				290				110					260			
Lower	Compliance	G39S	Boron, total	ug/l	GMZ	200				130				130					100			
Lower	Downgradient	G41M	Boron, total	ug/l	GMZ	200				600				79					27			
Lower	Compliance	G52M	Boron, total	ug/L	GMZ	200																
Lower	Compliance	G54M	Boron, total	ug/L	GMZ	200																
Lower	Compliance	R39S	Boron, total	ug/L	GMZ	200																
Lower	Downgradient	G03M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	390	490	100	370	510	260	49	41		41	37	38	35		42	
Lower	Downgradient	G16M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	220	170	66	23	250	180	74	43		73	75	66	27		45	
Lower	Downgradient	G18D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	31	30	30	32	30	32	32	31		30	22	22	23		27	
Lower	Downgradient	G33D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	9.8	9.9	10	11	10	14	15	13		19	16	18	17		19	
Lower	Downgradient	G34D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	27	26	24	24	23	24	27	27		33	26	23	29		93	92
Lower	Downgradient	G35D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	51	68	83	210	94	200	240	45		200	40	38	40		250	
Lower	Downgradient	G36S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	12	12	11	11	11	22	26	31		34	35	34	32		32	
Lower	Downgradient	G37D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	23	22	23	24	26	26	26	29		30	28	29	47		47	
Lower	Downgradient	G38S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	200	260	250	190	74	75	99	160		300	280	180	310		490	
Lower	Compliance	G39S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	110	100	97	100	77	98	69	3.6		100	98	96	48		100	
Lower	Downgradient	G41M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	280	300	300	350	390	380	240	40		160	44	40	35		260	
Lower	Compliance	G52M	Chloride, Dissolved	mg/L	G1, GMZ	87.511																
Lower	Compliance	G54M	Chloride, Dissolved	mg/L	G1, GMZ	87.511																
Lower	Compliance	R39S	Chloride, Dissolved	mg/L	G1, GMZ	87.511																
Lower	Downgradient	G03M	Chloride, total	mg/l	GMZ	87.51186				380				39					35			
Lower	Downgradient	G16M	Chloride, total	mg/l	GMZ	87.51186				23				41					51			
Lower	Downgradient	G18D	Chloride, total	mg/l	GMZ	87.51186				32				31					23			
Lower	Downgradient	G33D	Chloride, total	mg/l	GMZ	87.51186				8.6				12					17			
Lower	Downgradient	G34D	Chloride, total	mg/l	GMZ	87.51186				25				29					24			
Lower	Downgradient	G35D	Chloride, total	mg/l	GMZ	87.51186				190				46					39			
Lower	Downgradient	G36S	Chloride, total	mg/l	GMZ	87.51186				11				32					36			
Lower	Downgradient	G37D	Chloride, total	mg/l	GMZ	87.51186				27				31					43			
Lower	Downgradient	G38S	Chloride, total	mg/l	GMZ	87.51186				200				150					310			
Lower	Compliance	G39S	Chloride, total	mg/l	GMZ	87.51186				100				3.8					37			
Lower	Downgradient	G41M	Chloride, total	mg/l	GMZ	87.51186				360				41					39			
Lower	Compliance	G52M	Chloride, total	mg/L	GMZ	87.51186																
Lower	Compliance	G54M	Chloride, total	mg/L	GMZ	87.51186																
Lower	Compliance	R39S	Chloride, total	mg/L	GMZ	87.51186																

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Lower	Downgradient	G03M	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G16M	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G18D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G33D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G34D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G35D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G36S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G37D	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G38S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G39S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Downgradient	G41M	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Lower	Compliance	G52M	Ethylbenzene	ug/L	G2, GMZ	5																
Lower	Compliance	G54M	Ethylbenzene	ug/L	G2, GMZ	5																
Lower	Compliance	R39S	Ethylbenzene	ug/L	G2, GMZ	5																
Lower	Downgradient	G03M	Fluoride, total	mg/l	GMZ	273.35				0.35				< 0.25					< 0.25			
Lower	Downgradient	G16M	Fluoride, total	mg/l	GMZ	273.35				0.29				< 0.25					< 0.25			
Lower	Downgradient	G18D	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Lower	Downgradient	G33D	Fluoride, total	mg/l	GMZ	273.35				0.29				< 0.25					< 0.25			
Lower	Downgradient	G34D	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Lower	Downgradient	G35D	Fluoride, total	mg/l	GMZ	273.35				0.25				< 0.25					< 0.25			
Lower	Downgradient	G36S	Fluoride, total	mg/l	GMZ	273.35				0.29				< 0.25					< 0.25			
Lower	Downgradient	G37D	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Lower	Downgradient	G38S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Lower	Compliance	G39S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Lower	Downgradient	G41M	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Lower	Compliance	G52M	Fluoride, total	mg/L	GMZ	273.35																
Lower	Compliance	G54M	Fluoride, total	mg/L	GMZ	273.35																
Lower	Compliance	R39S	Fluoride, total	mg/L	GMZ	273.35																
Lower	Downgradient	G03M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.2	< 0.02	< 0.02	< 0.2	< 0.02	< 0.02	1.6	5.5		7	8.8	7.8	8.6		8.2	
Lower	Downgradient	G16M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.2	0.022	2.9	3.8	< 0.02	0.062	3	4.2		3.8	3	H 4.6	4.1		7.8	
Lower	Downgradient	G18D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	12	11	10	10	9.6	10	10	9.7		9.4	8.5	H 7.9	7.4		7.2	
Lower	Downgradient	G33D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	3.6	3.4	3.9	3.7	4.1	6.1	8.3	7.4		0.97	8.5	9	9.6		9.5	
Lower	Downgradient	G34D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9.4	9.1	9.3	9.5	9	8.8	9	7.9		8.8	8.7	H 8.9	9		5.5	
Lower	Downgradient	G35D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	5.9	5.1	3	0.077	3.3	< 0.2	< 0.02	< 0.02		< 0.02	0.38	6.2	7.2		< 0.02	
Lower	Downgradient	G36S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	5.3	5.5	5.2	5.2	5	8.9	10	11		12	12	12	11		11	
Lower	Downgradient	G37D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9.6	10	H 10	9.7	10	8.8	10	11		11	10	8.7	8		8	
Lower	Downgradient	G38S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.6	< 0.02	R 0.58	0.073	< 0.02	0.61	2.9	3		1.3	1.4	2.5	1.6		< 0.02	
Lower	Compliance	G39S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.81	0.085	0.17	< 0.02	< 0.02	0.2	< 0.02	< 0.02		0.043	< 0.02	< 0.02	0.078		0.065	
Lower	Downgradient	G41M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.25	0.076	0.074	0.061	< 0.02	< 0.02	< 0.02	0.52		0.051	7.8	6.6	3.6		0.075	
Lower	Compliance	G52M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																
Lower	Compliance	G54M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																
Lower	Compliance	R39S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																
Lower	Downgradient	G03M	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.2				5.3					8.6			
Lower	Downgradient	G16M	Nitrate as N, total	mg/l	GMZ	11.7389				3.8				4					H 8.6			
Lower	Downgradient	G18D	Nitrate as N, total	mg/l	GMZ	11.7389				11				9.6					7.5			
Lower	Downgradient	G33D	Nitrate as N, total	mg/l	GMZ	11.7389				3.6				7.3					9.6			
Lower	Downgradient	G34D	Nitrate as N, total	mg/l	GMZ	11.7389				9.3				8.2					8.8			
Lower	Downgradient	G35D	Nitrate as N, total	mg/l	GMZ	11.7389				0.073				< 0.02					7.1			
Lower	Downgradient	G36S	Nitrate as N, total	mg/l	GMZ	11.7389				5.3				11					12	12		
Lower	Downgradient	G37D	Nitrate as N, total	mg/l	GMZ	11.7389				11				11					7.7			
Lower	Downgradient	G38S	Nitrate as N, total	mg/l	GMZ	11.7389				0.089				3					1.7			
Lower	Compliance	G39S	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				< 0.02					0.075			
Lower	Downgradient	G41M	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				0.32					3.8			
Lower	Compliance	G52M	Nitrate as N, total	mg/L	GMZ	11.7389																
Lower	Compliance	G54M	Nitrate as N, total	mg/L	GMZ	11.7389																
Lower	Compliance	R39S	Nitrate as N, total	mg/L	GMZ	11.7389																

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Lower	Downgradient	G03M	Potassium, total	mg/l	GMZ	29.00582				63				13					5.8			
Lower	Downgradient	G16M	Potassium, total	mg/l	GMZ	29.00582				10				19					14			
Lower	Downgradient	G18D	Potassium, total	mg/l	GMZ	29.00582				2.6				3.4					3.5			
Lower	Downgradient	G33D	Potassium, total	mg/l	GMZ	29.00582				0.7				0.92					4.8			
Lower	Downgradient	G34D	Potassium, total	mg/l	GMZ	29.00582				1.6				2.9					5.3			
Lower	Downgradient	G35D	Potassium, total	mg/l	GMZ	29.00582				24				25					10			
Lower	Downgradient	G36S	Potassium, total	mg/l	GMZ	29.00582				0.65				0.94					0.9			
Lower	Downgradient	G37D	Potassium, total	mg/l	GMZ	29.00582				2				2.2					2.7			
Lower	Downgradient	G38S	Potassium, total	mg/l	GMZ	29.00582				25				12					29			
Lower	Compliance	G39S	Potassium, total	mg/l	GMZ	29.00582				8.6				9.5					8.9			
Lower	Downgradient	G41M	Potassium, total	mg/l	GMZ	29.00582				49				10					2.9			
Lower	Compliance	G52M	Potassium, total	mg/L	GMZ	29.00582																
Lower	Compliance	G54M	Potassium, total	mg/L	GMZ	29.00582																
Lower	Compliance	R39S	Potassium, total	mg/L	GMZ	29.00582																
Lower	Downgradient	G03M	Sodium, total	mg/l	GMZ	164.7897				170				17					13			
Lower	Downgradient	G16M	Sodium, total	mg/l	GMZ	164.7897				14				27					20			
Lower	Downgradient	G18D	Sodium, total	mg/l	GMZ	164.7897				10				11					8			
Lower	Downgradient	G33D	Sodium, total	mg/l	GMZ	164.7897				3.9				4.3					6.6			
Lower	Downgradient	G34D	Sodium, total	mg/l	GMZ	164.7897				6.1				4.1					3.3			
Lower	Downgradient	G35D	Sodium, total	mg/l	GMZ	164.7897				83				25					14			
Lower	Downgradient	G36S	Sodium, total	mg/l	GMZ	164.7897				4.1				9.8					11			
Lower	Downgradient	G37D	Sodium, total	mg/l	GMZ	164.7897				7.6				9.4					9.9			
Lower	Downgradient	G38S	Sodium, total	mg/l	GMZ	164.7897				97				44					94			
Lower	Compliance	G39S	Sodium, total	mg/l	GMZ	164.7897				47				47					45			
Lower	Downgradient	G41M	Sodium, total	mg/l	GMZ	164.7897				160				16					13			
Lower	Compliance	G52M	Sodium, total	mg/L	GMZ	164.7897																
Lower	Compliance	G54M	Sodium, total	mg/L	GMZ	164.7897																
Lower	Compliance	R39S	Sodium, total	mg/L	GMZ	164.7897																
Lower	Downgradient	G03M	Tetrahydrofuran	ug/l	G2, GMZ	42				34				< 5					< 5			
Lower	Downgradient	G16M	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G18D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G33D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G34D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G35D	Tetrahydrofuran	ug/l	G2, GMZ	42				18				< 5					< 5			
Lower	Downgradient	G36S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G37D	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G38S	Tetrahydrofuran	ug/l	G2, GMZ	42				10				12	22				17			
Lower	Compliance	G39S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Lower	Downgradient	G41M	Tetrahydrofuran	ug/l	G2, GMZ	42				32				< 5					< 5			
Lower	Compliance	G52M	Tetrahydrofuran	ug/L	G2, GMZ	42																
Lower	Compliance	G54M	Tetrahydrofuran	ug/L	G2, GMZ	42																
Lower	Compliance	R39S	Tetrahydrofuran	ug/L	G2, GMZ	42																

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Upper	Downgradient	G119	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G130	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G15S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G17S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G18S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G33S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G34S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G35S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G37S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G40S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G41S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G50S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																
Upper	Downgradient	G51S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5																
Upper	Compliance	G52S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																
Upper	Compliance	G54S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5																
Upper	Downgradient	R03S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	R42S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G119	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G130	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G15S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G17S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G18S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G33S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G34S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G35S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G37S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G40S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G41S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G50S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																
Upper	Downgradient	G51S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5																
Upper	Compliance	G52S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																
Upper	Compliance	G54S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5																
Upper	Downgradient	R03S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	R42S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G119	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G130	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G15S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				6				9	9				8			
Upper	Downgradient	G17S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G18S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G33S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G34S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G35S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				1				< 1					< 1			
Upper	Downgradient	G37S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G40S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				5				5	5				5			
Upper	Downgradient	G41S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				5				3	3				2			
Upper	Downgradient	G50S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																
Upper	Downgradient	G51S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5																
Upper	Compliance	G52S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																
Upper	Compliance	G54S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5																
Upper	Downgradient	R03S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				2	1				< 1			
Upper	Downgradient	R42S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G119	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Upper	Downgradient	G130	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Upper	Downgradient	G15S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	120	140	180	130	120	120	150	250		280	280	260	180		132	
Upper	Downgradient	G17S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Upper	Downgradient	G18S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9			8.6	1.7	2.8	0.74	2.2	0.29		0.16	4.9	< 0.05	< 0.05		< 0.09	
Upper	Downgradient	G33S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	A 0.14	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05	< 0.05		< 0.09	
Upper	Downgradient	G34S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	A 5.2	6.5	4.8	1.4	3.8	5.2	3.6	4.6		4.4	9.9	24	21		20	
Upper	Downgradient	G35S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	25	41	42	35	21	63	81	62		52	61	6.7	43		40	
Upper	Downgradient	G37S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.43	< 0.05	0.17	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		0.56	0.54	0.43	0.51		0.75	
Upper	Downgradient	G40S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	11	16	17	20	13	15	15	19		19	23	24	24		22	
Upper	Downgradient	G41S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	94	120	92	127.1	110	120	160	120		120	86	93	76		87	
Upper	Downgradient	G50S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																
Upper	Downgradient	G51S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9																
Upper	Compliance	G52S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																
Upper	Compliance	G54S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9																
Upper	Downgradient	R03S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	160	220	200	180	220	140	91	90		58	88	41	13.8		34	
Upper	Downgradient	R42S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	2	2.3	2	1.5	2.9	2.6	1.6	1		1.1	0.77	0.58	1.9		2.2	

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Upper	Downgradient	G119	Ammonia as N, total	mg/l	GMZ	900				< 0.05				< 0.05					< 0.05			
Upper	Downgradient	G130	Ammonia as N, total	mg/l	GMZ	900				< 0.05				< 0.05					< 0.05			
Upper	Downgradient	G15S	Ammonia as N, total	mg/l	GMZ	900				140				210					170			
Upper	Downgradient	G17S	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.16					< 0.05			
Upper	Downgradient	G18S	Ammonia as N, total	mg/l	GMZ	900				3.2				0.97					Q 0.059			
Upper	Downgradient	G33S	Ammonia as N, total	mg/l	GMZ	900				< 0.05				0.12					< 0.05			
Upper	Downgradient	G34S	Ammonia as N, total	mg/l	GMZ	900				5.823				4.1					22			
Upper	Downgradient	G35S	Ammonia as N, total	mg/l	GMZ	900				33				72					42			
Upper	Downgradient	G37S	Ammonia as N, total	mg/l	GMZ	900				< 0.05				< 0.05					0.48			
Upper	Downgradient	G40S	Ammonia as N, total	mg/l	GMZ	900				20				19					24			
Upper	Downgradient	G41S	Ammonia as N, total	mg/l	GMZ	900				110				130					75			
Upper	Downgradient	G50S	Ammonia as N, total	mg/l	GMZ	900																
Upper	Downgradient	G51S	Ammonia as N, total	mg/l	GMZ	900																
Upper	Compliance	G52S	Ammonia as N, total	mg/L	GMZ	900																
Upper	Compliance	G54S	Ammonia as N, total	mg/L	GMZ	900																
Upper	Downgradient	R03S	Ammonia as N, total	mg/l	GMZ	900				180				76					28			
Upper	Downgradient	R42S	Ammonia as N, total	mg/l	GMZ	900				1.6				1.1					1.9			
Upper	Downgradient	G119	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G130	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G15S	Arsenic, Dissolved	ug/l	G1, GMZ	2	3.2	2	< 1	3	4	2	2.8	< 1		4.4	4.7	6.2	4.9		1.7	
Upper	Downgradient	G17S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G18S	Arsenic, Dissolved	ug/l	G1, GMZ	2			< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G33S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G34S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G35S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G37S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1		< 1	
Upper	Downgradient	G40S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	1		1	
Upper	Downgradient	G41S	Arsenic, Dissolved	ug/l	G1, GMZ	2	26	23	21	25	26	31	28	25		28	28	30	31		32	
Upper	Downgradient	G50S	Arsenic, Dissolved	ug/l	G1, GMZ	2																
Upper	Downgradient	G51S	Arsenic, Dissolved	ug/l	G1, GMZ	2																
Upper	Compliance	G52S	Arsenic, Dissolved	ug/L	G1, GMZ	2																
Upper	Compliance	G54S	Arsenic, Dissolved	ug/L	G1, GMZ	2																
Upper	Downgradient	R03S	Arsenic, Dissolved	ug/l	G1, GMZ	2	13	12	14	16	19	17	13	12		12	12	14	16		15	
Upper	Downgradient	R42S	Arsenic, Dissolved	ug/l	G1, GMZ	2	24	17	18	18	21	25	23	16		27	12	21	42		58	
Upper	Downgradient	G119	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G130	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G15S	Arsenic, total	ug/l	GMZ	10				2				7.6					5.1			
Upper	Downgradient	G17S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G18S	Arsenic, total	ug/l	GMZ	10				66				66					130			
Upper	Downgradient	G33S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G34S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G35S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G37S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G40S	Arsenic, total	ug/l	GMZ	10				< 1				< 1					< 1			
Upper	Downgradient	G41S	Arsenic, total	ug/l	GMZ	10				23				28					30			
Upper	Downgradient	G50S	Arsenic, total	ug/l	GMZ	10																
Upper	Downgradient	G51S	Arsenic, total	ug/l	GMZ	10																
Upper	Compliance	G52S	Arsenic, total	ug/L	GMZ	10																
Upper	Compliance	G54S	Arsenic, total	ug/L	GMZ	10																
Upper	Downgradient	R03S	Arsenic, total	ug/l	GMZ	10				14				12					13			
Upper	Downgradient	R42S	Arsenic, total	ug/l	GMZ	10				16				16					43			
Upper	Downgradient	G119	Barium, total	ug/l	GMZ	225180.6				38				32					26			
Upper	Downgradient	G130	Barium, total	ug/l	GMZ	225180.6				120				130					140			
Upper	Downgradient	G15S	Barium, total	ug/l	GMZ	225180.6				250				590					360			
Upper	Downgradient	G17S	Barium, total	ug/l	GMZ	225180.6				110				44					37			
Upper	Downgradient	G18S	Barium, total	ug/l	GMZ	225180.6				1900				1900					1900			
Upper	Downgradient	G33S	Barium, total	ug/l	GMZ	225180.6				56				63					62			
Upper	Downgradient	G34S	Barium, total	ug/l	GMZ	225180.6				140				190					190			
Upper	Downgradient	G35S	Barium, total	ug/l	GMZ	225180.6				270				280					230			
Upper	Downgradient	G37S	Barium, total	ug/l	GMZ	225180.6				46				57					67			
Upper	Downgradient	G40S	Barium, total	ug/l	GMZ	225180.6				220				280					320			
Upper	Downgradient	G41S	Barium, total	ug/l	GMZ	225180.6				510				220					200			
Upper	Downgradient	G50S	Barium, total	ug/l	GMZ	225180.6																
Upper	Downgradient	G51S	Barium, total	ug/l	GMZ	225180.6																
Upper	Compliance	G52S	Barium, total	ug/L	GMZ	225180.6																
Upper	Compliance	G54S	Barium, total	ug/L	GMZ	225180.6																
Upper	Downgradient	R03S	Barium, total	ug/l	GMZ	225180.6				500				270					270			
Upper	Downgradient	R42S	Barium, total	ug/l	GMZ	225180.6				620				460					740			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Upper	Downgradient	G119	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	34	76	14	37	35	30	17		17	27	< 10	< 10		< 10	
Upper	Downgradient	G130	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	26	35	< 10	29	22	40	< 10		< 10	21	< 10	< 10		16	
Upper	Downgradient	G15S	Boron, Dissolved	ug/l	G1, GMZ	98	440	380	710	400	390	430	700	1100		970	1500	980	780		480	
Upper	Downgradient	G17S	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	57	59	40	56	67	60	52		60	56	40	18		32	
Upper	Downgradient	G18S	Boron, Dissolved	ug/l	G1, GMZ	98			210	76	170	200	130	210		160	240	96	70		98	
Upper	Downgradient	G33S	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	14	< 10	16	21	21	20	< 10		< 10	18	< 10	< 10		15	
Upper	Downgradient	G34S	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	50	27	47	57	58	50	120		150	160	100	120		120	
Upper	Downgradient	G35S	Boron, Dissolved	ug/l	G1, GMZ	98	180	290	300	200	160	440	450	280		290	320	220	220		200	
Upper	Downgradient	G37S	Boron, Dissolved	ug/l	G1, GMZ	98	< 98	47	23	41	38	42	70	64		79	95	63	83		82	
Upper	Downgradient	G40S	Boron, Dissolved	ug/l	G1, GMZ	98	130	130	130	150	110	130	140	160		140	200	130	170		130	
Upper	Downgradient	G41S	Boron, Dissolved	ug/l	G1, GMZ	98	410	550	480	580	520	570	1000	700		620	530	400	380		500	
Upper	Downgradient	G50S	Boron, Dissolved	ug/l	G1, GMZ	98																
Upper	Downgradient	G51S	Boron, Dissolved	ug/l	G1, GMZ	98																
Upper	Compliance	G52S	Boron, Dissolved	ug/L	G1, GMZ	98																
Upper	Compliance	G54S	Boron, Dissolved	ug/L	G1, GMZ	98																
Upper	Downgradient	R03S	Boron, Dissolved	ug/l	G1, GMZ	98	1000	960	1100	950	1200	990	580	410		310	280	230	180		250	
Upper	Downgradient	R42S	Boron, Dissolved	ug/l	G1, GMZ	98	110	130	120	110	86	86	60	37		36	48	23	50		79	
Upper	Downgradient	G119	Boron, total	ug/l	GMZ	200				18				25					< 10			
Upper	Downgradient	G130	Boron, total	ug/l	GMZ	200				17				< 10					< 10			
Upper	Downgradient	G15S	Boron, total	ug/l	GMZ	200				380				1000					810			
Upper	Downgradient	G17S	Boron, total	ug/l	GMZ	200				52				45					15			
Upper	Downgradient	G18S	Boron, total	ug/l	GMZ	200				280				340					260			
Upper	Downgradient	G33S	Boron, total	ug/l	GMZ	200				14				< 10					< 10			
Upper	Downgradient	G34S	Boron, total	ug/l	GMZ	200				18				100					110			
Upper	Downgradient	G35S	Boron, total	ug/l	GMZ	200				150				270					200			
Upper	Downgradient	G37S	Boron, total	ug/l	GMZ	200				32				66					75			
Upper	Downgradient	G40S	Boron, total	ug/l	GMZ	200				150				150					170			
Upper	Downgradient	G41S	Boron, total	ug/l	GMZ	200				550				650					400			
Upper	Downgradient	G50S	Boron, total	ug/l	GMZ	200																
Upper	Downgradient	G51S	Boron, total	ug/l	GMZ	200																
Upper	Compliance	G52S	Boron, total	ug/L	GMZ	200																
Upper	Compliance	G54S	Boron, total	ug/L	GMZ	200																
Upper	Downgradient	R03S	Boron, total	ug/l	GMZ	200				920				380					200			
Upper	Downgradient	R42S	Boron, total	ug/l	GMZ	200				96				32					44			
Upper	Downgradient	G119	Chloride, Dissolved	mg/l	G1, GMZ	87.511	38	31	30	14	27	27	26	26		27	26	21	23		23	
Upper	Downgradient	G130	Chloride, Dissolved	mg/l	G1, GMZ	87.511	12	10	12	13	11	13	15	22		32	24	29	32		33	
Upper	Downgradient	G15S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	410	360	480	310	400	310	440	710		690	760	660	510		280	
Upper	Downgradient	G17S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	59	25	52	38	44	48	44	33		30	25	30	13		31	
Upper	Downgradient	G18S	Chloride, Dissolved	mg/l	G1, GMZ	87.511			85	33	50	37	49	27		22	43	25	34		15	
Upper	Downgradient	G33S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	11	9.6	9.2	8.4	9.3	9.4	13	12		14	16	16	13		17	
Upper	Downgradient	G34S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	30	30	28	43	48	46	52	95		74	76	81	61		64	
Upper	Downgradient	G35S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	98	100	110	92	86	150	170	70		74	59	58	58		53	
Upper	Downgradient	G37S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	52	61	49	64	38	41	74	65		88	86	100	120	82	72	
Upper	Downgradient	G40S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	78	90	96	81	59	89	91	120		120	150	150	170		110	
Upper	Downgradient	G41S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	200	270	190	290	250	300	320	150		140	94	96	99		150	
Upper	Downgradient	G50S	Chloride, Dissolved	mg/l	G1, GMZ	87.511																
Upper	Downgradient	G51S	Chloride, Dissolved	mg/l	G1, GMZ	87.511																
Upper	Compliance	G52S	Chloride, Dissolved	mg/L	G1, GMZ	87.511																
Upper	Compliance	G54S	Chloride, Dissolved	mg/L	G1, GMZ	87.511																
Upper	Downgradient	R03S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	420	440	370	400	610	230	140	91		85	73	72	83		120	
Upper	Downgradient	R42S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	94	85	67	75	69	99	85	84		100	83	82	160		140	
Upper	Downgradient	G119	Chloride, total	mg/l	GMZ	87.51186				14				25					22			
Upper	Downgradient	G130	Chloride, total	mg/l	GMZ	87.51186				11				21					32			
Upper	Downgradient	G15S	Chloride, total	mg/l	GMZ	87.51186				290				740					480			
Upper	Downgradient	G17S	Chloride, total	mg/l	GMZ	87.51186				Q 30				29					15			
Upper	Downgradient	G18S	Chloride, total	mg/l	GMZ	87.51186				33				30					35			
Upper	Downgradient	G33S	Chloride, total	mg/l	GMZ	87.51186				8.6				13					13			
Upper	Downgradient	G34S	Chloride, total	mg/l	GMZ	87.51186				44				94					68			
Upper	Downgradient	G35S	Chloride, total	mg/l	GMZ	87.51186				83				100					60			
Upper	Downgradient	G37S	Chloride, total	mg/l	GMZ	87.51186				61				67					120	85		
Upper	Downgradient	G40S	Chloride, total	mg/l	GMZ	87.51186				100				110					170			
Upper	Downgradient	G41S	Chloride, total	mg/l	GMZ	87.51186				290				150					95			
Upper	Downgradient	G50S	Chloride, total	mg/l	GMZ	87.51186																
Upper	Downgradient	G51S	Chloride, total	mg/l	GMZ	87.51186																
Upper	Compliance	G52S	Chloride, total	mg/L	GMZ	87.51186																
Upper	Compliance	G54S	Chloride, total	mg/L	GMZ	87.51186																
Upper	Downgradient	R03S	Chloride, total	mg/l	GMZ	87.51186				400				99					84			
Upper	Downgradient	R42S	Chloride, total	mg/l	GMZ	87.51186				74				86					170			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Upper	Downgradient	G119	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G130	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G15S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G17S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G18S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G33S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G34S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G35S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G37S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G40S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G41S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G50S	Ethylbenzene	ug/l	G2, GMZ	5																
Upper	Downgradient	G51S	Ethylbenzene	ug/l	G2, GMZ	5																
Upper	Compliance	G52S	Ethylbenzene	ug/L	G2, GMZ	5																
Upper	Compliance	G54S	Ethylbenzene	ug/L	G2, GMZ	5																
Upper	Downgradient	R03S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	R42S	Ethylbenzene	ug/l	G2, GMZ	5				< 1				< 1					< 1			
Upper	Downgradient	G119	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Upper	Downgradient	G130	Fluoride, total	mg/l	GMZ	273.35				0.28				< 0.25					< 0.25			
Upper	Downgradient	G15S	Fluoride, total	mg/l	GMZ	273.35				0.28				< 0.25					< 0.25			
Upper	Downgradient	G17S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Upper	Downgradient	G18S	Fluoride, total	mg/l	GMZ	273.35				0.25				< 0.25					< 0.25			
Upper	Downgradient	G33S	Fluoride, total	mg/l	GMZ	273.35				0.3				< 0.25					< 0.25			
Upper	Downgradient	G34S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Upper	Downgradient	G35S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				0.25					< 0.25			
Upper	Downgradient	G37S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Upper	Downgradient	G40S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					< 0.25			
Upper	Downgradient	G41S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				0.32					0.263			
Upper	Downgradient	G50S	Fluoride, total	mg/l	GMZ	273.35																
Upper	Downgradient	G51S	Fluoride, total	mg/l	GMZ	273.35																
Upper	Compliance	G52S	Fluoride, total	mg/L	GMZ	273.35																
Upper	Compliance	G54S	Fluoride, total	mg/L	GMZ	273.35																
Upper	Downgradient	R03S	Fluoride, total	mg/l	GMZ	273.35				0.34				0.29					< 0.25			
Upper	Downgradient	R42S	Fluoride, total	mg/l	GMZ	273.35				< 0.25				< 0.25					0.281			
Upper	Downgradient	G119	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	20	18	14	10	15	14	15	15		15	13	12	14		H 35	
Upper	Downgradient	G130	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.6	9.6	6	4.7	4.2	6.8	9	9.9		12	12	11	H 10		11	
Upper	Downgradient	G15S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.57	0.033	< 0.02	H< 0.2	< 0.02	0.045	< 0.02	0.61		0.047	0.26	< 0.02	< 0.02		< 0.02	
Upper	Downgradient	G17S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	4.8	1.9	1.2	1.8	3.8	4.5	6.5	4.2		1.3	9.8	H 0.83	3.3		3.2	
Upper	Downgradient	G18S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74			8.8	6.5	4.4	6.3	2.8	H 37		3	< 0.2	H 6	13		0.44	
Upper	Downgradient	G33S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	4.1	3.2	3.1	3.2	3.6	3.4	6.7	6.5		0.76	8.9	7.8	7.7		9.1	
Upper	Downgradient	G34S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	7.2	7.2	7.5	6.2	5.8	6.2	6.6	2		2.6	2.7	3.5	4.3		5.5	
Upper	Downgradient	G35S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.39	0.12	0.14	0.1	0.18	< 0.02	< 0.02	< 0.02		< 0.02	< 0.02	H< 0.02	< 0.02		0.6	
Upper	Downgradient	G37S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.1	5.7	6.1	1.9	4.4	5	3.8	4.4		2.8	1.8	1.5	H 1.1		0.55	
Upper	Downgradient	G40S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	2.4	1.2	0.36	1.1	4	1.5	0.5	0.14		0.075	< 0.2	H< 0.02	0.41		0.92	
Upper	Downgradient	G41S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.2	5.3	0.32	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02		0.043	0.033	< 0.02	< 0.02		< 0.02	
Upper	Downgradient	G50S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																
Upper	Downgradient	G51S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74																
Upper	Compliance	G52S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																
Upper	Compliance	G54S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74																
Upper	Downgradient	R03S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.23	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	H< 0.02		0.043	< 0.2	< 0.02	< 0.02		< 0.02	
Upper	Downgradient	R42S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.28	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02		< 0.02	0.034	< 0.02	0.063		< 0.02	
Upper	Downgradient	G119	Nitrate as N, total	mg/l	GMZ	11.7389				10				14					14			
Upper	Downgradient	G130	Nitrate as N, total	mg/l	GMZ	11.7389				4.5				9.9					H 10			
Upper	Downgradient	G15S	Nitrate as N, total	mg/l	GMZ	11.7389				H< 0.2				0.63					< 0.02			
Upper	Downgradient	G17S	Nitrate as N, total	mg/l	GMZ	11.7389				1.5				3.9					H 3.6			
Upper	Downgradient	G18S	Nitrate as N, total	mg/l	GMZ	11.7389				7				H 27					13			
Upper	Downgradient	G33S	Nitrate as N, total	mg/l	GMZ	11.7389				3.3				7.1					8.3			
Upper	Downgradient	G34S	Nitrate as N, total	mg/l	GMZ	11.7389				6				2.2					4.1			
Upper	Downgradient	G35S	Nitrate as N, total	mg/l	GMZ	11.7389				0.094				8.2					< 0.02			
Upper	Downgradient	G37S	Nitrate as N, total	mg/l	GMZ	11.7389				1.8				4.6					H 1			
Upper	Downgradient	G40S	Nitrate as N, total	mg/l	GMZ	11.7389				1.1				0.13					< 0.02			
Upper	Downgradient	G41S	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				< 0.02					< 0.02			
Upper	Downgradient	G50S	Nitrate as N, total	mg/l	GMZ	11.7389																
Upper	Downgradient	G51S	Nitrate as N, total	mg/l	GMZ	11.7389																
Upper	Compliance	G52S	Nitrate as N, total	mg/L	GMZ	11.7389																
Upper	Compliance	G54S	Nitrate as N, total	mg/L	GMZ	11.7389																
Upper	Downgradient	R03S	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				H< 0.02					0.041			
Upper	Downgradient	R42S	Nitrate as N, total	mg/l	GMZ	11.7389				< 0.02				< 0.02					< 0.02			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03	2ndQtr03re	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re
Upper	Downgradient	G119	Potassium, total	mg/l	GMZ	29.00582				0.76				1.5					1.2			
Upper	Downgradient	G130	Potassium, total	mg/l	GMZ	29.00582				0.56				0.74					0.78			
Upper	Downgradient	G15S	Potassium, total	mg/l	GMZ	29.00582				48				110					83			
Upper	Downgradient	G17S	Potassium, total	mg/l	GMZ	29.00582				1.4				2.2					1.9			
Upper	Downgradient	G18S	Potassium, total	mg/l	GMZ	29.00582				34				51					74			
Upper	Downgradient	G33S	Potassium, total	mg/l	GMZ	29.00582				0.61				0.65					0.61			
Upper	Downgradient	G34S	Potassium, total	mg/l	GMZ	29.00582				4.8				5.1					11			
Upper	Downgradient	G35S	Potassium, total	mg/l	GMZ	29.00582				19				27					20			
Upper	Downgradient	G37S	Potassium, total	mg/l	GMZ	29.00582				3.1				4.8					5.1			
Upper	Downgradient	G40S	Potassium, total	mg/l	GMZ	29.00582				16				19					22			
Upper	Downgradient	G41S	Potassium, total	mg/l	GMZ	29.00582				53				56					46			
Upper	Downgradient	G50S	Potassium, total	mg/l	GMZ	29.00582																
Upper	Downgradient	G51S	Potassium, total	mg/l	GMZ	29.00582																
Upper	Compliance	G52S	Potassium, total	mg/L	GMZ	29.00582																
Upper	Compliance	G54S	Potassium, total	mg/L	GMZ	29.00582																
Upper	Downgradient	R03S	Potassium, total	mg/l	GMZ	29.00582				81				44					25			
Upper	Downgradient	R42S	Potassium, total	mg/l	GMZ	29.00582				0.61				0.63					1			
Upper	Downgradient	G119	Sodium, total	mg/l	GMZ	164.7897				5.4				7.6					6.9			
Upper	Downgradient	G130	Sodium, total	mg/l	GMZ	164.7897				4.5				4.6					9.3			
Upper	Downgradient	G15S	Sodium, total	mg/l	GMZ	164.7897				140				350					240			
Upper	Downgradient	G17S	Sodium, total	mg/l	GMZ	164.7897				20				19					10			
Upper	Downgradient	G18S	Sodium, total	mg/l	GMZ	164.7897				22				30					22			
Upper	Downgradient	G33S	Sodium, total	mg/l	GMZ	164.7897				4.5				4.2					4.4			
Upper	Downgradient	G34S	Sodium, total	mg/l	GMZ	164.7897				12				42					30			
Upper	Downgradient	G35S	Sodium, total	mg/l	GMZ	164.7897				42				61					39			
Upper	Downgradient	G37S	Sodium, total	mg/l	GMZ	164.7897				15				25					45			
Upper	Downgradient	G40S	Sodium, total	mg/l	GMZ	164.7897				45				52					62			
Upper	Downgradient	G41S	Sodium, total	mg/l	GMZ	164.7897				150				95					51			
Upper	Downgradient	G50S	Sodium, total	mg/l	GMZ	164.7897																
Upper	Downgradient	G51S	Sodium, total	mg/l	GMZ	164.7897																
Upper	Compliance	G52S	Sodium, total	mg/L	GMZ	164.7897																
Upper	Compliance	G54S	Sodium, total	mg/L	GMZ	164.7897																
Upper	Downgradient	R03S	Sodium, total	mg/l	GMZ	164.7897				210				58					30			
Upper	Downgradient	R42S	Sodium, total	mg/l	GMZ	164.7897				50				29					43			
Upper	Downgradient	G119	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G130	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G15S	Tetrahydrofuran	ug/l	G2, GMZ	42				91				85	74				56			
Upper	Downgradient	G17S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G18S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G33S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G34S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G35S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			
Upper	Downgradient	G37S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					8			
Upper	Downgradient	G40S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					8			
Upper	Downgradient	G41S	Tetrahydrofuran	ug/l	G2, GMZ	42				26				9	10				< 5			
Upper	Downgradient	G50S	Tetrahydrofuran	ug/l	G2, GMZ	42																
Upper	Downgradient	G51S	Tetrahydrofuran	ug/l	G2, GMZ	42																
Upper	Compliance	G52S	Tetrahydrofuran	ug/L	G2, GMZ	42																
Upper	Compliance	G54S	Tetrahydrofuran	ug/L	G2, GMZ	42																
Upper	Downgradient	R03S	Tetrahydrofuran	ug/l	G2, GMZ	42				34				6	< 5				< 5			
Upper	Downgradient	R42S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 5				< 5					< 5			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Bedrock	Upgradient	G09D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G13D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G13S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G14D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G20D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G41D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G13D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G13S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G14D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G20D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G41D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			10				10				7				7
Bedrock	Upgradient	G09M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				2				2				4
Bedrock	Upgradient	G13D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			7				< 1				< 1				< 1
Bedrock	Upgradient	G13S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G14D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G20D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G41D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.1	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	0.24	0.092	< 0.09	0.25	< 0.09	<Q 0.09	0.15	< 0.09
Bedrock	Upgradient	G09M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	5.2	1.3	0.71	0.15	< 0.1	< 0.1	< 0.09	0.27	7.1	0.26	Q 0.3	0.1	< 0.09	0.12	< 0.09
Bedrock	Upgradient	G13D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.098	< 0.09	0.14	0.24	0.1	0.13	0.65	0.2	Q 0.28	0.24	0.45	0.12	0.28	< 0.09	0.36
Bedrock	Upgradient	G13S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.27	0.17	0.2	0.39	0.39	0.34	< 0.1	< 0.09	0.14	< 0.09	0.22	0.094	0.17	0.33	0.22
Bedrock	Downgradient	G14D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	3.2	1.6													
Bedrock	Downgradient	G16D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.15	< 0.09
Bedrock	Upgradient	G20D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Bedrock	Downgradient	G41D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	0.13	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	0.41	0.13	< 0.09	0.52	< 0.09	< 0.09	0.12	0.58
Bedrock	Upgradient	G09D	Ammonia as N, total	mg/l	GMZ	900			0.095				< 0.09	0.24	0.092	9.1	0.37	< 0.09	< 0.09	< 0.09	< 0.09
Bedrock	Upgradient	G09M	Ammonia as N, total	mg/l	GMZ	900			0.76				< 0.09	0.24	4.2	0.24	0.35	0.32	< 0.09	< 0.09	< 0.09
Bedrock	Upgradient	G13D	Ammonia as N, total	mg/l	GMZ	900			0.18				0.73	0.17	0.19	Q 0.12	0.54	0.13	0.24	0.1	0.22
Bedrock	Upgradient	G13S	Ammonia as N, total	mg/l	GMZ	900			0.2				< 0.09	< 0.09	0.11	< 0.09	0.28	< 0.09	0.12	0.32	0.26
Bedrock	Downgradient	G14D	Ammonia as N, total	mg/l	GMZ	900															
Bedrock	Downgradient	G16D	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Bedrock	Upgradient	G20D	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	0.12	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Bedrock	Downgradient	G41D	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	0.13	0.37	< 0.09	0.36	< 0.09	< 0.09	< 0.09	0.38
Bedrock	Upgradient	G09D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	2.7	< 1	2.1	3.9	1.2	1	1.2	< 1	1.4
Bedrock	Upgradient	G09M	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.8	< 1	< 1	< 1	< 1	< 1	1.4	1.4	3	1.1	1.4	1.3	1.7	1.4	1.3
Bedrock	Upgradient	G13D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	1.1	1.1	1.4	1.1	1.6	15	2.3	1.8	9.5
Bedrock	Upgradient	G13S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.1	1.6	1.9	1.3	2.4	1.9	1.5	1	2	1.8	1.8	1.2	1.6	1.6	2.3
Bedrock	Downgradient	G14D	Arsenic, Dissolved	ug/l	G1, GMZ	2	13	6.2													
Bedrock	Downgradient	G16D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bedrock	Upgradient	G20D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.9	< 1	< 1	< 1	< 1	< 1	< 1
Bedrock	Downgradient	G41D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Bedrock	Upgradient	G09D	Arsenic, total	ug/l	GMZ	10			< 1		1.6	< 1	3.2	2	4.5	4.4	2.2	2.2	1.5	3.3	1.9
Bedrock	Upgradient	G09M	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	1.9	1.8	2.9	1.4	1.4	2.1	2.2	1.8	1.4
Bedrock	Upgradient	G13D	Arsenic, total	ug/l	GMZ	10			< 1		< 1	1.5	1.2	1.6	1.4	1.2	21	21	18	12	27
Bedrock	Upgradient	G13S	Arsenic, total	ug/l	GMZ	10			1.9		2.1	1.5	1.5	< 1	1.8	1.8	3.9	1.8	2.3	2.6	2.4
Bedrock	Downgradient	G14D	Arsenic, total	ug/l	GMZ	10															
Bedrock	Downgradient	G16D	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bedrock	Upgradient	G20D	Arsenic, total	ug/l	GMZ	10			1.3		16	< 1	< 1	< 1	25	10	< 1	16	6.2	4.8	< 1
Bedrock	Downgradient	G41D	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	< 1	1.5	< 1	< 1	< 1	< 1	< 1	< 1
Bedrock	Upgradient	G09D	Barium, total	ug/l	GMZ	225180.6			470		450	360	470	480	500	570	480	630	600	550	640
Bedrock	Upgradient	G09M	Barium, total	ug/l	GMZ	225180.6			140		160	140	180	240	220	230	200	260	230	220	250
Bedrock	Upgradient	G13D	Barium, total	ug/l	GMZ	225180.6			170		160	170	190	190	190	200	430	230	360	120	140
Bedrock	Upgradient	G13S	Barium, total	ug/l	GMZ	225180.6			240		230	260	180	330	290	280	340	210	270	270	320
Bedrock	Downgradient	G14D	Barium, total	ug/l	GMZ	225180.6															
Bedrock	Downgradient	G16D	Barium, total	ug/l	GMZ	225180.6			94		97	100	99	100	94	97	100	98	100	98	99
Bedrock	Upgradient	G20D	Barium, total	ug/l	GMZ	225180.6			57		360	79	67	94	380	280	100	180	130	160	89
Bedrock	Downgradient	G41D	Barium, total	ug/l	GMZ	225180.6			44		58	70	74	48	50	45	50	67	69	100	98
Bedrock	Upgradient	G09D	Boron, Dissolved	ug/l	G1, GMZ	98	45	44	46	51	34	20	35	56	50	110	47	42	46	40	47
Bedrock	Upgradient	G09M	Boron, Dissolved	ug/l	G1, GMZ	98	21	18	18	21	15	22	27	28	32	26	19	32	26	27	27
Bedrock	Upgradient	G13D	Boron, Dissolved	ug/l	G1, GMZ	98	80	56	56	54	43	52	55	64	65	59	74	220	100	110	130
Bedrock	Upgradient	G13S	Boron, Dissolved	ug/l	G1, GMZ	98	87	91	100	95	86	110	92	100	120	87	87	69	88	77	96
Bedrock	Downgradient	G14D	Boron, Dissolved	ug/l	G1, GMZ	98	84	88													
Bedrock	Downgradient	G16D	Boron, Dissolved	ug/l	G1, GMZ	98	< 10	10	< 10	< 10	< 10	11	13	13	15	12	< 10	21	13	13	10
Bedrock	Upgradient	G20D	Boron, Dissolved	ug/l	G1, GMZ	98	27	20	15	19	15	20	21	28	24	22	14	24	18	21	19
Bedrock	Downgradient	G41D	Boron, Dissolved	ug/l	G1, GMZ	98	< 10	11	< 10	13	< 10	11	14	23	16	21	12	15	< 10	16	17
Bedrock	Upgradient	G09D	Boron, total	ug/l	GMZ	200			56		46	40	38	52	43	60	50	46	45	40	34
Bedrock	Upgradient	G09M	Boron, total	ug/l	GMZ	200			22		22	20	22	27	20	36	23	32	27	24	14
Bedrock	Upgradient	G13D	Boron, total	ug/l	GMZ	200			57		48	51	65	56	57	54	190		120	120	140
Bedrock	Upgradient	G13S	Boron, total	ug/l	GMZ	200			92		84	99	98	97	100	92	92	74	85	86	82
Bedrock	Downgradient	G14D	Boron, total	ug/l	GMZ	200															
Bedrock	Downgradient	G16D	Boron, total	ug/l	GMZ	200			< 10		41	13	14	< 10	< 10	15	15	19	15	14	12
Bedrock	Upgradient	G20D	Boron, total	ug/l	GMZ	200			16		130	24	18	28	92	48	27	40	39	46	20
Bedrock	Downgradient	G41D	Boron, total	ug/l	GMZ	200			13		14	14	18	19	20	20	28	19	13	17	< 10
Bedrock	Upgradient	G09D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	20	22	31	35	29	23	78	32	32	57	31	98	23	23	37
Bedrock	Upgradient	G09M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	250	250	260	310	290	270	360	250	370	370	430	200	380	430	400
Bedrock	Upgradient	G13D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	91	84	92	98	86	110	90	94	100	97	40	60	100	34	19
Bedrock	Upgradient	G13S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	56	67	57	59	53	39	190	46	48	66	54	100	120	120	220
Bedrock	Downgradient	G14D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	55	49													
Bedrock	Downgradient	G16D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	11	12	12	12	14	12	14	14	12	12	12	14	12	14	13
Bedrock	Upgradient	G20D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	28	26	30	25	24	22	25	14	22	30	27	31	32	20	25
Bedrock	Downgradient	G41D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	16	15	21	19	27	25	25	25	16	16	23	26	37	30	36
Bedrock	Upgradient	G09D	Chloride, total	mg/l	GMZ	87.51186			29		28	90	73	35	32	33	36	140	48	22	45
Bedrock	Upgradient	G09M	Chloride, total	mg/l	GMZ	87.51186			260		270	180	350	280	370	380	420	200	400	460	430
Bedrock	Upgradient	G13D	Chloride, total	mg/l	GMZ	87.51186			99		100	81	88	100	110	100	38	57	100	31	26
Bedrock	Upgradient	G13S	Chloride, total	mg/l	GMZ	87.51186			58		51	52	190	45	51	65	56	210	120	120	200
Bedrock	Downgradient	G14D	Chloride, total	mg/l	GMZ	87.51186															
Bedrock	Downgradient	G16D	Chloride, total	mg/l	GMZ	87.51186			13		14	13	15	14	12	12	12	13	12	14	13
Bedrock	Upgradient	G20D	Chloride, total	mg/l	GMZ	87.51186			29		22	20	24	14	24	32	27	30	28	25	24
Bedrock	Downgradient	G41D	Chloride, total	mg/l	GMZ	87.51186			23		26	26	25	24	21	17	20	24	27	29	36

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Bedrock	Upgradient	G09D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09M	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G13D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G13S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G14D	Ethylbenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G20D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Downgradient	G41D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Bedrock	Upgradient	G09D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bedrock	Upgradient	G09M	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bedrock	Upgradient	G13D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.25	< 0.25	< 0.25
Bedrock	Upgradient	G13S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bedrock	Downgradient	G14D	Fluoride, total	mg/l	GMZ	273.35															
Bedrock	Downgradient	G16D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	0.26	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bedrock	Upgradient	G20D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bedrock	Downgradient	G41D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bedrock	Upgradient	G09D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.035	H< 0.02	0.046	0.034	< 0.02	3.8	< 0.02	0.032	0.077	0.072	0.024	0.37	0.09	0.1	< 0.02
Bedrock	Upgradient	G09M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.051	H 0.055	0.072	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.4	0.095	< 0.02	0.6	0.031	< 0.02	< 0.02
Bedrock	Upgradient	G13D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.02	< 0.02	< 0.02	H< 0.02	< 0.02	2.1	< 0.02	< 0.02	< 0.02	H 3.8	0.18	0.36	1.5	< 0.02
Bedrock	Upgradient	G13S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.2	< 0.02	< 0.02	H 0.021	< 0.02	H 30	2.1	0.11	0.027	< 0.02	0.53	0.43	< 0.02	< 0.02
Bedrock	Downgradient	G14D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.02													
Bedrock	Downgradient	G16D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	3.5	3.5	3.3	4	4.5	4.9	4.4	4.5	4.1	H 4.3	3.9	4.5	4.5	5.2	4.5
Bedrock	Upgradient	G20D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	4.5	3.8	4.8	4	3.9	4	3.7	2.7	3.5	4.3	4.8	H 4.4	4.5	3	3.9
Bedrock	Downgradient	G41D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	4.6	4.5	6.6	3.7	8.7	8.9	8.9	5.6	5	4.9	6.6	9.4	9	H 10	8.6
Bedrock	Upgradient	G09D	Nitrate as N, total	mg/l	GMZ	11.7389			0.048		< 0.02	< 0.02	< 0.02	< 0.02	0.13	< 0.02	0.023	0.62	0.061	0.031	< 0.02
Bedrock	Upgradient	G09M	Nitrate as N, total	mg/l	GMZ	11.7389			0.13		< 0.02	0.11	< 0.02	< 0.02	0.19	< 0.02	< 0.02	0.59	< 0.02	< 0.02	< 0.02
Bedrock	Upgradient	G13D	Nitrate as N, total	mg/l	GMZ	11.7389			< 0.02		H< 0.02	< 0.02	1.8	0.4	< 0.02	< 0.02	H 3.9	0.12	0.25	1.9	< 0.02
Bedrock	Upgradient	G13S	Nitrate as N, total	mg/l	GMZ	11.7389			< 0.02		H 0.022	0.14	H 30	2.2	< 0.02	< 0.02	0.023	0.18	0.37	< 0.02	< 0.02
Bedrock	Downgradient	G14D	Nitrate as N, total	mg/l	GMZ	11.7389															
Bedrock	Downgradient	G16D	Nitrate as N, total	mg/l	GMZ	11.7389			3.2		4.6	5	4.6	4.7	4.1	H 4.3	3.9	4.3	4.3	4.8	4.7
Bedrock	Upgradient	G20D	Nitrate as N, total	mg/l	GMZ	11.7389			4.7		3.8	3.8	3.5	2.8	3.5	4.2	4.8	H 4.1	4.2	3.6	4.1
Bedrock	Downgradient	G41D	Nitrate as N, total	mg/l	GMZ	11.7389			6.3		8.4	9.3	8.9	4.8	3.5	4.5	6.1	7.7	9.5	9.8	9.1
Bedrock	Upgradient	G09D	Potassium, total	mg/l	GMZ	29.00582			0.75		0.7	0.78	1	0.71	0.7	1.1	0.91	0.8	0.55	0.54	0.59
Bedrock	Upgradient	G09M	Potassium, total	mg/l	GMZ	29.00582			1.3		0.9	0.98	0.88	0.95	2.8	1.3	1.1	0.87	1.3	0.86	0.79
Bedrock	Upgradient	G13D	Potassium, total	mg/l	GMZ	29.00582			5.2		3	3.2	5.8	3.3	3	3.2	37	46	14	27	21
Bedrock	Upgradient	G13S	Potassium, total	mg/l	GMZ	29.00582			10		8.9	10	6.3	11	9.9	12	12	7.1	12	12	12
Bedrock	Downgradient	G14D	Potassium, total	mg/l	GMZ	29.00582															
Bedrock	Downgradient	G16D	Potassium, total	mg/l	GMZ	29.00582			1.4		1.2	1.6	1.3	1.5	1.1	1.1	1.3	1.3	1.3	1	1.1
Bedrock	Upgradient	G20D	Potassium, total	mg/l	GMZ	29.00582			1		19	2.2	2	2.6	12	6.2	2.4	7.6	4.6	6.1	1.9
Bedrock	Downgradient	G41D	Potassium, total	mg/l	GMZ	29.00582			1.3		1.6	1.2	1.3	2.2	1.7	1.6	1.7	1.3	1.1	1.2	1.4
Bedrock	Upgradient	G09D	Sodium, total	mg/l	GMZ	164.7897			19		21	46	50	19	20	18	18	71	20	20	25
Bedrock	Upgradient	G09M	Sodium, total	mg/l	GMZ	164.7897			94		120	120	120	130	120	130	140	160	160	150	180
Bedrock	Upgradient	G13D	Sodium, total	mg/l	GMZ	164.7897			49		54	61	45	49	59	56	16	26	53	14	18
Bedrock	Upgradient	G13S	Sodium, total	mg/l	GMZ	164.7897			34		32	36	64	44	45	35	42	120	54	59	79
Bedrock	Downgradient	G14D	Sodium, total	mg/l	GMZ	164.7897															
Bedrock	Downgradient	G16D	Sodium, total	mg/l	GMZ	164.7897			5.4		5.3	5.3	5.1	5.3	5.2	4.8	5.1	5.5	5.3	5	5.1
Bedrock	Upgradient	G20D	Sodium, total	mg/l	GMZ	164.7897			5.6		6.5	7.5	6.4	6.9	6.9	6.8	8.4	8.4	7.7	6.8	8.2
Bedrock	Downgradient	G41D	Sodium, total	mg/l	GMZ	164.7897			5.9		11	11	9.7	6.9	6.6	5.9	7.7	8.9	8.8	9.4	9.7
Bedrock	Upgradient	G09D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Bedrock	Upgradient	G09M	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Bedrock	Upgradient	G13D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Bedrock	Upgradient	G13S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Bedrock	Downgradient	G14D	Tetrahydrofuran	ug/l	G2, GMZ	42															
Bedrock	Downgradient	G16D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Bedrock	Upgradient	G20D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Bedrock	Downgradient	G41D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Lower	Downgradient	G03M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G16M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Lower	Downgradient	G18D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G33D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G34D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G35D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G36S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G37D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G38S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G39S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G41M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G52M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	G54M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Downgradient	G03M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G16M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Lower	Downgradient	G18D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G33D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G34D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G35D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G36S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G37D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G38S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G39S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G41M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G52M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	G54M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Downgradient	G03M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G16M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Lower	Downgradient	G18D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G33D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G34D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G35D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				3				< 1
Lower	Downgradient	G36S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G37D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G38S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G39S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			3				1				3				< 1
Lower	Downgradient	G41M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			1				< 1				2				< 1
Lower	Compliance	G52M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	G54M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Lower	Downgradient	G03M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	2.4	1.5	1.8	1.1	0.33	0.16	0.24	0.19	0.26	0.1	0.11	< 0.09	< 0.09	< 0.09	< 0.09
Lower	Downgradient	G16M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	12	9.3	6.9	5	6	5.6	4.7	3	2.6	3.8	2.6	2.3	2.5	1.2	0.35
Lower	Downgradient	G18D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	0.094	< 0.09	0.12	< 0.09	< 0.09	< 0.09	< 0.09	3
Lower	Downgradient	G33D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09		<Q 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Lower	Downgradient	G34D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.26	0.16	1.6	< 0.1	< 0.1	<Q 0.1	< 0.09	7.9	2.4	< 0.09	7	1	0.25	< 0.09	< 0.09
Lower	Downgradient	G35D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	6.2	0.73	3	3.7	0.54	0.52	0.45	0.41	0.52	0.14	68	0.62	0.29	3.9	2.2
Lower	Downgradient	G36S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	0.15	< 0.09	< 0.09	< 0.09	< 0.09
Lower	Downgradient	G37D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	0.094	0.1	< 0.09	< 0.09	< 0.09	0.15	0.97	1.1
Lower	Downgradient	G38S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	84	77	78	71	160	170	52	10	45	24	62	77	79	62	48
Lower	Compliance	G39S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	6	5.8	5.4	3.4	4.3		0.36	3.1	1.7	1.2	1.6	0.79	0.62	0.16	< 0.09
Lower	Downgradient	G41M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	72	4.8	62	18	0.98	0.13	< 0.09	17	52	6.5	75	26	9.9	9.7	0.45
Lower	Compliance	G52M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															
Lower	Compliance	G54M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															
Lower	Compliance	R39S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Lower	Downgradient	G03M	Ammonia as N, total	mg/l	GMZ	900			1.6				0.21	0.17	0.23	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Lower	Downgradient	G16M	Ammonia as N, total	mg/l	GMZ	900			6.9				4.7	3	2.6	3.8	2.6	2.3	2.2	1	0.47
Lower	Downgradient	G18D	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	< 0.09	0.1	< 0.09	< 0.09	< 0.09	3.1
Lower	Downgradient	G33D	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	<R 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Lower	Downgradient	G34D	Ammonia as N, total	mg/l	GMZ	900			1.5				< 0.09	8.1	2.6	< 0.09	7.1	0.93	0.25	0.12	< 0.09
Lower	Downgradient	G35D	Ammonia as N, total	mg/l	GMZ	900			3				0.47	0.38	0.5	0.12	67	0.62	0.28	4	2.2
Lower	Downgradient	G36S	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	< 0.09	0.12	< 0.09	< 0.09	< 0.09	< 0.09
Lower	Downgradient	G37D	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	20	< 0.09	< 0.09	0.11	0.74	0.96
Lower	Downgradient	G38S	Ammonia as N, total	mg/l	GMZ	900			80				50	5.4	38	24	62	74	77	64	50
Lower	Compliance	G39S	Ammonia as N, total	mg/l	GMZ	900			5.3				0.31	2.8	1.6	1.2	1.6	0.86	0.64	0.11	< 0.09
Lower	Downgradient	G41M	Ammonia as N, total	mg/l	GMZ	900			56				< 0.09	24	51	6.3	74	26	11	11	0.44
Lower	Compliance	G52M	Ammonia as N, total	mg/L	GMZ	900															
Lower	Compliance	G54M	Ammonia as N, total	mg/L	GMZ	900															
Lower	Compliance	R39S	Ammonia as N, total	mg/L	GMZ	900															
Lower	Downgradient	G03M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G16M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G18D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G33D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G34D	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G35D	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.3	< 1	< 1	< 1	< 1
Lower	Downgradient	G36S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G37D	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G38S	Arsenic, Dissolved	ug/l	G1, GMZ	2	3.3	3.5	2.6	3.5	2.6	2.4	2.2	1.3	1.6	< 1	1.6	2.2	2.2	2.4	2.3
Lower	Compliance	G39S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.5	< 1	< 1	1.1	< 1	< 1	< 1	1.2	< 1	2	< 1	< 1	< 1	1.2	< 1
Lower	Downgradient	G41M	Arsenic, Dissolved	ug/l	G1, GMZ	2	4.2	1.1	2.5	2.4	< 1	1.2	< 1	1.8	2.8	< 1	3.7	< 1	1.7	< 1	< 1
Lower	Compliance	G52M	Arsenic, Dissolved	ug/L	G1, GMZ	2															
Lower	Compliance	G54M	Arsenic, Dissolved	ug/L	G1, GMZ	2															
Lower	Compliance	R39S	Arsenic, Dissolved	ug/L	G1, GMZ	2															
Lower	Downgradient	G03M	Arsenic, total	ug/l	GMZ	10			< 1		1.7	3.8	< 1	7.9	1.4	1	< 1	3.3	< 1	< 1	< 1
Lower	Downgradient	G16M	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G18D	Arsenic, total	ug/l	GMZ	10			2.1		< 1	1.1	2.3	1.2	1	2	2.5	51	4.6	1.3	1
Lower	Downgradient	G33D	Arsenic, total	ug/l	GMZ	10			< 1		< 1	14	1.3	2	< 1	< 1	< 1	2.5	< 1	1.5	1.7
Lower	Downgradient	G34D	Arsenic, total	ug/l	GMZ	10			< 1		1.1	< 1	< 1	< 1	< 1	< 1	1.2	< 1	< 1	5	< 1
Lower	Downgradient	G35D	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	1.1	< 1	< 1	1.9	< 1	< 1	7.2	1.3
Lower	Downgradient	G36S	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G37D	Arsenic, total	ug/l	GMZ	10			1.5		3.2	< 1	< 1	1.7	1.4	< 1	< 1	1.2	1	2	< 1
Lower	Downgradient	G38S	Arsenic, total	ug/l	GMZ	10			2.3		3.1	1.9	2.3	2.4	1	1.1	2.2	2.1	2.8	2.4	2
Lower	Compliance	G39S	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	1.6	< 1	2	< 1	< 1	3.9	2.1	1.9
Lower	Downgradient	G41M	Arsenic, total	ug/l	GMZ	10			56		79	22	4.4	150	170	94	12	7.1	7.3	23	2
Lower	Compliance	G52M	Arsenic, total	ug/L	GMZ	10															
Lower	Compliance	G54M	Arsenic, total	ug/L	GMZ	10															
Lower	Compliance	R39S	Arsenic, total	ug/L	GMZ	10															
Lower	Downgradient	G03M	Barium, total	ug/l	GMZ	225180.6			140		150	160	140	200	160	150	150	180	150	150	150
Lower	Downgradient	G16M	Barium, total	ug/l	GMZ	225180.6			260		290	280	280	270	250	260	240	240	250	190	170
Lower	Downgradient	G18D	Barium, total	ug/l	GMZ	225180.6			60		36	48	56	51	51	64	68	700	88	83	100
Lower	Downgradient	G33D	Barium, total	ug/l	GMZ	225180.6			96		93	170	110	120	100	100	110	110	110	96	120
Lower	Downgradient	G34D	Barium, total	ug/l	GMZ	225180.6			69		62	44	61	120	68	66	100	73	80	140	88
Lower	Downgradient	G35D	Barium, total	ug/l	GMZ	225180.6			360		210	190	190	250	180	190	790	190	180	250	190
Lower	Downgradient	G36S	Barium, total	ug/l	GMZ	225180.6			180		180	200	200	210	200	210	220	210	200	210	200
Lower	Downgradient	G37D	Barium, total	ug/l	GMZ	225180.6			34		100	100	53	64	59	57	63	66	62	83	60
Lower	Downgradient	G38S	Barium, total	ug/l	GMZ	225180.6			1100		1	770	670	660	830	660	1300	980	960	680	600
Lower	Compliance	G39S	Barium, total	ug/l	GMZ	225180.6			280		270	150	69	260	220	220	170	130	280	170	85
Lower	Downgradient	G41M	Barium, total	ug/l	GMZ	225180.6			490		170	130	140	410	510	230	580	180	250	220	140
Lower	Compliance	G52M	Barium, total	ug/L	GMZ	225180.6															
Lower	Compliance	G54M	Barium, total	ug/L	GMZ	225180.6															
Lower	Compliance	R39S	Barium, total	ug/L	GMZ	225180.6															

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Lower	Downgradient	G03M	Boron, Dissolved	ug/l	G1, GMZ	98	52	47	44	36	19	25	22	33	25	29	33	23	21	21	22
Lower	Downgradient	G16M	Boron, Dissolved	ug/l	G1, GMZ	98	80	53	44	64	43	51	38	41	48	50	24	65	44	27	20
Lower	Downgradient	G18D	Boron, Dissolved	ug/l	G1, GMZ	98	12	18	11	17	< 10	18	16	19	36	47	20	< 10	21	75	160
Lower	Downgradient	G33D	Boron, Dissolved	ug/l	G1, GMZ	98	< 10	11	< 10	11	< 10	11	< 10	16	13	< 10	< 10	< 10	11	< 10	< 10
Lower	Downgradient	G34D	Boron, Dissolved	ug/l	G1, GMZ	98	23	20	44	< 10	< 10	25	38	120	48	64	85	72	79	140	160
Lower	Downgradient	G35D	Boron, Dissolved	ug/l	G1, GMZ	98	60	30	55	58	18	30	22	43	32	25	410	34	25	38	34
Lower	Downgradient	G36S	Boron, Dissolved	ug/l	G1, GMZ	98	28	12	12	15	< 10	15	12	19	18	16	< 10	16	< 10	16	17
Lower	Downgradient	G37D	Boron, Dissolved	ug/l	G1, GMZ	98	12	18	20	22	12	25	25	35	40	35	26	40	31	42	60
Lower	Downgradient	G38S	Boron, Dissolved	ug/l	G1, GMZ	98	440	320	470	390	380	380	230	190	270	190	360	360	320	240	200
Lower	Compliance	G39S	Boron, Dissolved	ug/l	G1, GMZ	98	110	120	130	130	120	99	38	150	120	130	110	78	63	35	42
Lower	Downgradient	G41M	Boron, Dissolved	ug/l	G1, GMZ	98	330	58	380	140	22	27	37	200	370	73	540	120	180	69	36
Lower	Compliance	G52M	Boron, Dissolved	ug/L	G1, GMZ	98															
Lower	Compliance	G54M	Boron, Dissolved	ug/L	G1, GMZ	98															
Lower	Compliance	R39S	Boron, Dissolved	ug/L	G1, GMZ	98															
Lower	Downgradient	G03M	Boron, total	ug/l	GMZ	200			47		36	32	31	43	29	36	31	27	21	22	24
Lower	Downgradient	G16M	Boron, total	ug/l	GMZ	200			39		59	46	50	44	37	45	36	66	43	32	23
Lower	Downgradient	G18D	Boron, total	ug/l	GMZ	200			21		17	21	24	20	28	49	35	230	37	90	180
Lower	Downgradient	G33D	Boron, total	ug/l	GMZ	200			< 10		< 10	21	14	15	12	13	15	15	13	13	< 10
Lower	Downgradient	G34D	Boron, total	ug/l	GMZ	200			42		22	26	41	120	50	66	98	70	82	180	160
Lower	Downgradient	G35D	Boron, total	ug/l	GMZ	200			51		26	26	27	43	29	29	430	34	31	45	35
Lower	Downgradient	G36S	Boron, total	ug/l	GMZ	200			< 10		< 10	12	17	17	13	18	21	16	14	15	12
Lower	Downgradient	G37D	Boron, total	ug/l	GMZ	200			21		35	140	28	35	36	42	41	40	37	56	45
Lower	Downgradient	G38S	Boron, total	ug/l	GMZ	200			430		400	400	230	150	250	180	390	340	350	250	190
Lower	Compliance	G39S	Boron, total	ug/l	GMZ	200			120		110	100	43	140	140	120	120	79	72	37	45
Lower	Downgradient	G41M	Boron, total	ug/l	GMZ	200			270		30	280	42	190	410	69	550	110	220	78	28
Lower	Compliance	G52M	Boron, total	ug/L	GMZ	200															
Lower	Compliance	G54M	Boron, total	ug/L	GMZ	200															
Lower	Compliance	R39S	Boron, total	ug/L	GMZ	200															
Lower	Downgradient	G03M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	43	44	41	44	41	40	40	45	43	44	46	47	51	43	40
Lower	Downgradient	G16M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	52	45	44	49	52	45	51	50	44	44	44	47	41	32	36
Lower	Downgradient	G18D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	28	32	28	22	24	23	26	32	34	38	47	18	38	100	92
Lower	Downgradient	G33D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	15	20	20	24	19	17	20	19	17	18	21	19	17	17	16
Lower	Downgradient	G34D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	55	50	82	99	110	120	94	150	94	120	120	140	170	130	110
Lower	Downgradient	G35D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	39	40	51	45	41	41	37	110	38	41	300	50	49	65	43
Lower	Downgradient	G36S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	33	35	35	35	35	31	34	33	32	33	33	36	40	38	36
Lower	Downgradient	G37D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	60	54	53	43	35	42	59	69	65	66	58	66	54	60	42
Lower	Downgradient	G38S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	300	250	320	240	200	200	140	180	180	120	300	220	54	140	110
Lower	Compliance	G39S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	100	110	110	120	110	140	28	130	100	110	120	57	140	270	18
Lower	Downgradient	G41M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	180	63	230	95	43	35	38	130	180	48	360	57	120	45	40
Lower	Compliance	G52M	Chloride, Dissolved	mg/L	G1, GMZ	87.511															
Lower	Compliance	G54M	Chloride, Dissolved	mg/L	G1, GMZ	87.511															
Lower	Compliance	R39S	Chloride, Dissolved	mg/L	G1, GMZ	87.511															
Lower	Downgradient	G03M	Chloride, total	mg/l	GMZ	87.51186			40		41	39	40	43	42	43	43	48	48	41	42
Lower	Downgradient	G16M	Chloride, total	mg/l	GMZ	87.51186			45		54	45	49	50	44	44	45	47	43	32	39
Lower	Downgradient	G18D	Chloride, total	mg/l	GMZ	87.51186			28		24	21	25	31	34	42	47	14	38	110	81
Lower	Downgradient	G33D	Chloride, total	mg/l	GMZ	87.51186			21		18	18	21	20	17	19	21	19	17	18	17
Lower	Downgradient	G34D	Chloride, total	mg/l	GMZ	87.51186			81		110	120	100	130	100	120	120	140	170	130	110
Lower	Downgradient	G35D	Chloride, total	mg/l	GMZ	87.51186			51		42	40	38	99	38	37	310	51	51	65	45
Lower	Downgradient	G36S	Chloride, total	mg/l	GMZ	87.51186			35		34	33	35		32	34	33	33	37	36	35
Lower	Downgradient	G37D	Chloride, total	mg/l	GMZ	87.51186			55		34	43	59	72	65	67	58	55	61	56	40
Lower	Downgradient	G38S	Chloride, total	mg/l	GMZ	87.51186			320		220	180	120	170	160	110	300	230	210	130	96
Lower	Compliance	G39S	Chloride, total	mg/l	GMZ	87.51186			120		110	130	29	120	100	100	110	82	100	260	16
Lower	Downgradient	G41M	Chloride, total	mg/l	GMZ	87.51186			200		50	36	40	130	170	54	360	64	120	45	40
Lower	Compliance	G52M	Chloride, total	mg/L	GMZ	87.51186															
Lower	Compliance	G54M	Chloride, total	mg/L	GMZ	87.51186															
Lower	Compliance	R39S	Chloride, total	mg/L	GMZ	87.51186															

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Lower	Downgradient	G03M	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G16M	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Lower	Downgradient	G18D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G33D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G34D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G35D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G36S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G37D	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G38S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G39S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Downgradient	G41M	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Lower	Compliance	G52M	Ethylbenzene	ug/L	G2, GMZ	5															
Lower	Compliance	G54M	Ethylbenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	Ethylbenzene	ug/L	G2, GMZ	5															
Lower	Downgradient	G03M	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G16M	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G18D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G33D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	0.26	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G34D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G35D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G36S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G37D	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G38S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Compliance	G39S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	0.28	< 0.25	< 0.25	< 0.25	< 0.25	0.32	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G41M	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Compliance	G52M	Fluoride, total	mg/L	GMZ	273.35															
Lower	Compliance	G54M	Fluoride, total	mg/L	GMZ	273.35															
Lower	Compliance	R39S	Fluoride, total	mg/L	GMZ	273.35															
Lower	Downgradient	G03M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	8.8	9.4	10	12	12	12	12	12	12	H 13	12	13	14	13	12
Lower	Downgradient	G16M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.6	H 9.1	9.3	7.4	7.2	9.1	9.2	11	10	H 11	13	10	12	11	7.1
Lower	Downgradient	G18D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.9	H 7.3	7	6.6	15	6.4	6.7	7.7	5.3	H 10	11	H 9.3	9.4	3.6	3.1
Lower	Downgradient	G33D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	8.8	9.9	9.7	10	9.9	10	11	9.8	9.3	9.6	11	10	9.9	9	9
Lower	Downgradient	G34D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	7.5	7.6	H 6.2	5.3	1.9	2.3	3.8	3.6	4.9	H 2.8	4.3	2.6	0.97	2.9	4.4
Lower	Downgradient	G35D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	7.4	10	6.2	9.3	11	12	12	4.4	9.1	H 12	0.52	9.2	12	4.8	12
Lower	Downgradient	G36S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	12	12	12	13	13	12	13	12	12	H 12	13	12	14	13	12
Lower	Downgradient	G37D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	7.1	7.2	7.5	7.7	7.7	0.48	6.4	6.8	6.3	H 6.7	H 7.1	8.3	8.3	8.4	9.8
Lower	Downgradient	G38S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.75	0.92	0.076	0.65	0.22	0.19	2.1	1.3	0.65	H 0.33	H 0.042	0.035	0.24	0.04	0.61
Lower	Compliance	G39S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.02	0.062	0.26	0.26	4.4	4.5	< 0.02	0.8	H 0.18	0.2	H 5.8	H 1.2	H 2.2	1.9
Lower	Downgradient	G41M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1.1	H 8.9	H 3.2	6.3	9.5	9.1	9.5	4	1.2	9.7	0.5	6.2	1.6	< 0.2	4.4
Lower	Compliance	G52M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															
Lower	Compliance	G54M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															
Lower	Compliance	R39S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															
Lower	Downgradient	G03M	Nitrate as N, total	mg/l	GMZ	11.7389			9.5		12	12	12	12	12	H 12	11	12	13	12	12
Lower	Downgradient	G16M	Nitrate as N, total	mg/l	GMZ	11.7389			9.3		7.5	9.1	8.8	12	10	H 11	13	10	12	11	7.4
Lower	Downgradient	G18D	Nitrate as N, total	mg/l	GMZ	11.7389			7.1		6.7	6.2	6.7	7.4	5.4	H 11	11	H 7.2	9.5	3.4	2.2
Lower	Downgradient	G33D	Nitrate as N, total	mg/l	GMZ	11.7389			9.9		9.7	10	11	10	9.5	9.7	10	10	9.9	9	9.3
Lower	Downgradient	G34D	Nitrate as N, total	mg/l	GMZ	11.7389			5.8		2.1	2.1	3.9	3.4	4.8	H 2.7	4.3	3	1	2.7	4.6
Lower	Downgradient	G35D	Nitrate as N, total	mg/l	GMZ	11.7389			6.2		11	12	12	6.6	9.4	H 11	H 0.48	9.1	12	4.8	12
Lower	Downgradient	G36S	Nitrate as N, total	mg/l	GMZ	11.7389			12		12	12	13		12	H 13	13	12	14	13	12
Lower	Downgradient	G37D	Nitrate as N, total	mg/l	GMZ	11.7389			7.6		7.6	0.47	6.4	7.1	6.3	H 6.7	7.1	6.6	8	8.7	9.6
Lower	Downgradient	G38S	Nitrate as N, total	mg/l	GMZ	11.7389			0.073		0.24	0.22	2.5	1.8	0.97	H 0.22	0.037	0.32	0.18	0.065	0.57
Lower	Compliance	G39S	Nitrate as N, total	mg/l	GMZ	11.7389			0.07		0.29	3.4	4.8	1.1	1	H 0.78	0.26	H 4.8	H 3.5	H 2.2	1.9
Lower	Downgradient	G41M	Nitrate as N, total	mg/l	GMZ	11.7389			H 3.2		9.4	9.6	9.6	3.6	2.3	9	0.5	5.3	0.87	< 0.2	4.4
Lower	Compliance	G52M	Nitrate as N, total	mg/L	GMZ	11.7389															
Lower	Compliance	G54M	Nitrate as N, total	mg/L	GMZ	11.7389															
Lower	Compliance	R39S	Nitrate as N, total	mg/L	GMZ	11.7389															

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Lower	Downgradient	G03M	Potassium, total	mg/l	GMZ	29.00582			5.2		3.7	3.9	2.8	4.4	3.4	2.8	2.9	3.2	2.6	2.5	2.3
Lower	Downgradient	G16M	Potassium, total	mg/l	GMZ	29.00582			7.8		7.6	7.4	7	5.9	4.8	5.6	4.6	4.5	4.3	2.6	2.1
Lower	Downgradient	G18D	Potassium, total	mg/l	GMZ	29.00582			3.5		2.6	3.5	3.5	3.5	3.2	3.4	4	24	5	3.8	7.8
Lower	Downgradient	G33D	Potassium, total	mg/l	GMZ	29.00582			1.2		0.8	4.3	1.2	1.3	1.6	0.8	B 1	1.4	0.82	1.6	1
Lower	Downgradient	G34D	Potassium, total	mg/l	GMZ	29.00582			4.9		2.4	1.9	2.7	8.4	3.8	2.7	6.8	3.6	3.3	6.2	4.3
Lower	Downgradient	G35D	Potassium, total	mg/l	GMZ	29.00582			8.2		3.6	3.8	3.5	3.2	2.7	2.7	30	2.8	2.6	6.5	5.4
Lower	Downgradient	G36S	Potassium, total	mg/l	GMZ	29.00582			1.1		0.9	1.1	1.3	1.4	1	1.2	B 1.3	1.2	1.1	1.1	1.1
Lower	Downgradient	G37D	Potassium, total	mg/l	GMZ	29.00582			1.6		6.5	11	2.9	3.6	2.9	2.9	3.8	4	4	5.7	4.2
Lower	Downgradient	G38S	Potassium, total	mg/l	GMZ	29.00582			32		38	37	26	10	18	15	32	30	30	26	24
Lower	Compliance	G39S	Potassium, total	mg/l	GMZ	29.00582			9.3		9.3	6.4	2	9.1	6.8	6.7	5.2	4	7.4	4	2.4
Lower	Downgradient	G41M	Potassium, total	mg/l	GMZ	29.00582			22		3.6	2.4	2.2	15	28	5.7	32	16	14	9.2	3.7
Lower	Compliance	G52M	Potassium, total	mg/L	GMZ	29.00582															
Lower	Compliance	G54M	Potassium, total	mg/L	GMZ	29.00582															
Lower	Compliance	R39S	Potassium, total	mg/L	GMZ	29.00582															
Lower	Downgradient	G03M	Sodium, total	mg/l	GMZ	164.7897			14		15	16	14	15	16	14	17	17	15	15	14
Lower	Downgradient	G16M	Sodium, total	mg/l	GMZ	164.7897			15		18	16	18	17	16	15	14	18	15	11	12
Lower	Downgradient	G18D	Sodium, total	mg/l	GMZ	164.7897			8.5		10	11	10	11	18	16	15	15	12	39	47
Lower	Downgradient	G33D	Sodium, total	mg/l	GMZ	164.7897			6.3		5.5	6.3	6.3	6.7	5.9	5.4	6.5	6.6	6	16	5.6
Lower	Downgradient	G34D	Sodium, total	mg/l	GMZ	164.7897			31		20	23	32	50	28	32	45	37	44	58	61
Lower	Downgradient	G35D	Sodium, total	mg/l	GMZ	164.7897			26		14	15	14	29	12	15	140	18	14	21	16
Lower	Downgradient	G36S	Sodium, total	mg/l	GMZ	164.7897			12		11	13	13	12	11	12	12	11	12	12	12
Lower	Downgradient	G37D	Sodium, total	mg/l	GMZ	164.7897			11		15	54	20	20	22	21	24	24	22	24	21
Lower	Downgradient	G38S	Sodium, total	mg/l	GMZ	164.7897			120		110	90	53	62	74	45	120	88	85	58	53
Lower	Compliance	G39S	Sodium, total	mg/l	GMZ	164.7897			51		60	87	59	56	56	52	59	33	41	94	16
Lower	Downgradient	G41M	Sodium, total	mg/l	GMZ	164.7897			85		15	14	18	53	96	17	160	18	61	15	15
Lower	Compliance	G52M	Sodium, total	mg/L	GMZ	164.7897															
Lower	Compliance	G54M	Sodium, total	mg/L	GMZ	164.7897															
Lower	Compliance	R39S	Sodium, total	mg/L	GMZ	164.7897															
Lower	Downgradient	G03M	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G16M	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				F< 5				< 5
Lower	Downgradient	G18D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G33D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G34D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G35D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				18				< 5
Lower	Downgradient	G36S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G37D	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G38S	Tetrahydrofuran	ug/l	G2, GMZ	42			29				8				< 5				< 5
Lower	Compliance	G39S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Lower	Downgradient	G41M	Tetrahydrofuran	ug/l	G2, GMZ	42			15				< 5				22				< 5
Lower	Compliance	G52M	Tetrahydrofuran	ug/L	G2, GMZ	42															
Lower	Compliance	G54M	Tetrahydrofuran	ug/L	G2, GMZ	42															
Lower	Compliance	R39S	Tetrahydrofuran	ug/L	G2, GMZ	42															

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Upper	Downgradient	G119	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1								
Upper	Downgradient	G130	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				T< 1
Upper	Downgradient	G15S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G17S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G18S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G33S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G34S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G35S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G37S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G40S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G41S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G50S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G51S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Compliance	G52S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Upper	Compliance	G54S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	R42S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G119	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1								
Upper	Downgradient	G130	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				T< 1
Upper	Downgradient	G15S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G17S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G18S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G33S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G34S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G35S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G37S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G40S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G41S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G50S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G51S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Compliance	G52S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Upper	Compliance	G54S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	R42S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G119	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1								
Upper	Downgradient	G130	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				T< 1
Upper	Downgradient	G15S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			2.1				7				8				9
Upper	Downgradient	G17S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G18S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G33S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G34S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G35S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G37S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G40S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				4				3				3
Upper	Downgradient	G41S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			2				1				< 1				< 1
Upper	Downgradient	G50S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G51S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5															
Upper	Compliance	G52S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Upper	Compliance	G54S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	R42S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G119	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09					
Upper	Downgradient	G130	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G15S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	120	100	110	130	190	180	130	150	110	100	80	140	260	340	240
Upper	Downgradient	G17S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	0.24	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G18S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.25	< 0.09	< 0.09	< 0.1	0.17	< 0.1	< 0.09	0.1	0.19	< 0.09	0.69	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G33S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G34S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	18	13	12	14	16	15	12	9.9	12	8	8.7	14	17	26	11
Upper	Downgradient	G35S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	45	41	34	26	20	17	14	15	17	10	16	5.4	6	6.2	3
Upper	Downgradient	G37S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	3.4	4.8	4.6	7.2	13	11	12	14	14	< 0.09	10	1	0.14	< 0.09	< 0.09
Upper	Downgradient	G40S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	32	34	34	29	36	120	41	39	47	45	23	18	19	26	15
Upper	Downgradient	G41S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	72	54	52	58	49	74	37	38	43	28	35	30	30	20	7.8
Upper	Downgradient	G50S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9															
Upper	Downgradient	G51S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9															
Upper	Compliance	G52S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															
Upper	Compliance	G54S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															
Upper	Downgradient	R03S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	25	17	15	11	10	7.6	9.2	10	11	7.6	9.6	5.3	4.9	4.1	2.4
Upper	Downgradient	R42S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.4	2	1.9	1.5	0.53	0.46	Q 1.9	1.6	1.2	2.1	2.3	2.4	1.4	2.1	2.1

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Upper	Downgradient	G119	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	< 0.09					
Upper	Downgradient	G130	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G15S	Ammonia as N, total	mg/l	GMZ	900			110				130	99	110	100	80	130		330	240
Upper	Downgradient	G17S	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	0.11	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G18S	Ammonia as N, total	mg/l	GMZ	900			0.64				< 0.09	0.13	0.15	< 0.09	1.2	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G33S	Ammonia as N, total	mg/l	GMZ	900			< 0.09				< 0.09	< 0.09	< 0.09	< 0.09	0.091	< 0.09	< 0.09	< 0.09	< 0.09
Upper	Downgradient	G34S	Ammonia as N, total	mg/l	GMZ	900			12				12	9.8	12	8.8	8.6	13	17	25	11
Upper	Downgradient	G35S	Ammonia as N, total	mg/l	GMZ	900			34				14	14	16	10	16	5.2	5.7	6.2	2.9
Upper	Downgradient	G37S	Ammonia as N, total	mg/l	GMZ	900			4.5				13	14	14	22	10	1	0.22	< 0.09	< 0.09
Upper	Downgradient	G40S	Ammonia as N, total	mg/l	GMZ	900			34				40	22	46	45	Q 24	19	19	20	18
Upper	Downgradient	G41S	Ammonia as N, total	mg/l	GMZ	900			53				15	39	43	27	35	30	30	19	7.9
Upper	Downgradient	G50S	Ammonia as N, total	mg/l	GMZ	900															
Upper	Downgradient	G51S	Ammonia as N, total	mg/l	GMZ	900															
Upper	Compliance	G52S	Ammonia as N, total	mg/L	GMZ	900															
Upper	Compliance	G54S	Ammonia as N, total	mg/L	GMZ	900															
Upper	Downgradient	R03S	Ammonia as N, total	mg/l	GMZ	900			15				8.5	10	11	7.8	9.6	5.2	4.8	4.2	2.3
Upper	Downgradient	R42S	Ammonia as N, total	mg/l	GMZ	900			1.9				1.8	1.6	1.2	2	2.2	2.4	1.4	2	1.8
Upper	Downgradient	G119	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1					
Upper	Downgradient	G130	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G15S	Arsenic, Dissolved	ug/l	G1, GMZ	2	2.3	3.2	3.3	2.9	3.8	3	5	3.5	3.6	6	2.5	4.5	9.5	8.6	11
Upper	Downgradient	G17S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G18S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.3	1.9	< 1	2.4	< 1	< 1	< 1	< 1
Upper	Downgradient	G33S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G34S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G35S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G37S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.2	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G40S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.9	1.5	1.1	1.8	< 1	1	1.6	1.4	1.3	2	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G41S	Arsenic, Dissolved	ug/l	G1, GMZ	2	30	33	34	33	30	33	33	32	42	35	36	38	37	27	32
Upper	Downgradient	G50S	Arsenic, Dissolved	ug/l	G1, GMZ	2															
Upper	Downgradient	G51S	Arsenic, Dissolved	ug/l	G1, GMZ	2															
Upper	Compliance	G52S	Arsenic, Dissolved	ug/L	G1, GMZ	2															
Upper	Compliance	G54S	Arsenic, Dissolved	ug/L	G1, GMZ	2															
Upper	Downgradient	R03S	Arsenic, Dissolved	ug/l	G1, GMZ	2	13	12	13	10	11	11	13	11	12	10	9.1	2.7	2.1	1.1	< 1
Upper	Downgradient	R42S	Arsenic, Dissolved	ug/l	G1, GMZ	2	44	49	39	19	12	10	34	22	40	31	29	42	21	30	50
Upper	Downgradient	G119	Arsenic, total	ug/l	GMZ	10			1.7		< 1	< 1	< 1	< 1	< 1	< 1					
Upper	Downgradient	G130	Arsenic, total	ug/l	GMZ	10			< 1		< 1	1.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G15S	Arsenic, total	ug/l	GMZ	10			2.7		9.2	5.2	4.7	7.5	3.1	11	3	17		12	15
Upper	Downgradient	G17S	Arsenic, total	ug/l	GMZ	10			< 1		1.3	< 1	< 1	4.6	2.3	3.2	1.3	3	3.4	2.4	< 1
Upper	Downgradient	G18S	Arsenic, total	ug/l	GMZ	10			150		5.8	27	1.4	21	32	15	11	2.2	59	63	25
Upper	Downgradient	G33S	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G34S	Arsenic, total	ug/l	GMZ	10			< 1		1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G35S	Arsenic, total	ug/l	GMZ	10			< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G37S	Arsenic, total	ug/l	GMZ	10			3.8		< 1	1.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G40S	Arsenic, total	ug/l	GMZ	10			< 1		1	< 1	1.5	1.2	< 1	2.5	< 1	2.2	< 1	< 1	2.5
Upper	Downgradient	G41S	Arsenic, total	ug/l	GMZ	10			43		47	33	36	35	38	40	40	42	46	33	33
Upper	Downgradient	G50S	Arsenic, total	ug/l	GMZ	10															
Upper	Downgradient	G51S	Arsenic, total	ug/l	GMZ	10															
Upper	Compliance	G52S	Arsenic, total	ug/L	GMZ	10															
Upper	Compliance	G54S	Arsenic, total	ug/L	GMZ	10															
Upper	Downgradient	R03S	Arsenic, total	ug/l	GMZ	10			13		26	16	14	19	23	28	9.2	42	8.5	6.7	1.2
Upper	Downgradient	R42S	Arsenic, total	ug/l	GMZ	10			40		15	11	34	54	49	70	46	53	38	37	58
Upper	Downgradient	G119	Barium, total	ug/l	GMZ	225180.6			21		34	36	20	32	40	34					
Upper	Downgradient	G130	Barium, total	ug/l	GMZ	225180.6			140		170	140	160	170	150	170	180	160	160	160	150
Upper	Downgradient	G15S	Barium, total	ug/l	GMZ	225180.6			250		530	460	320	560	300	420	280	570	800	760	720
Upper	Downgradient	G17S	Barium, total	ug/l	GMZ	225180.6			34		70	38	43	73	67	64	48	60	68	71	42
Upper	Downgradient	G18S	Barium, total	ug/l	GMZ	225180.6			2200		370	760	130	480	790	440	280	70	1100	850	640
Upper	Downgradient	G33S	Barium, total	ug/l	GMZ	225180.6			60		71	71	66	76	73	69	66	75	74	77	66
Upper	Downgradient	G34S	Barium, total	ug/l	GMZ	225180.6			180		260	220	200	200	220	240	180	250	290	280	180
Upper	Downgradient	G35S	Barium, total	ug/l	GMZ	225180.6			230		220	230	220	240	230	230	230	160	210	220	140
Upper	Downgradient	G37S	Barium, total	ug/l	GMZ	225180.6			54		100	63	110	100	100	120	72	49	40	37	36
Upper	Downgradient	G40S	Barium, total	ug/l	GMZ	225180.6			360		370	350	380	310	340	440	340	300	330	370	400
Upper	Downgradient	G41S	Barium, total	ug/l	GMZ	225180.6			320		300	210	210	220	280	240	240	230	260	170	160
Upper	Downgradient	G50S	Barium, total	ug/l	GMZ	225180.6															
Upper	Downgradient	G51S	Barium, total	ug/l	GMZ	225180.6															
Upper	Compliance	G52S	Barium, total	ug/L	GMZ	225180.6															
Upper	Compliance	G54S	Barium, total	ug/L	GMZ	225180.6															
Upper	Downgradient	R03S	Barium, total	ug/l	GMZ	225180.6			250		220	220	240	250	220	220	230	260	210	210	180
Upper	Downgradient	R42S	Barium, total	ug/l	GMZ	225180.6			860		290	300	790	910	710	650	410	380	310	390	450

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Upper	Downgradient	G119	Boron, Dissolved	ug/l	G1, GMZ	98	11	11	< 10	15	< 10	18	< 10	16	21	17					
Upper	Downgradient	G130	Boron, Dissolved	ug/l	G1, GMZ	98	24	13	15	14	< 10	17	14	18	18	15	11	17	16	18	15
Upper	Downgradient	G15S	Boron, Dissolved	ug/l	G1, GMZ	98	460	500	440	680	900	1000	580	620	460	660	400	710	1300	1400	1300
Upper	Downgradient	G17S	Boron, Dissolved	ug/l	G1, GMZ	98	38	50	26	41	30	37	25	46	50	66	22	40	43	36	19
Upper	Downgradient	G18S	Boron, Dissolved	ug/l	G1, GMZ	98	120	51	38	87	120	88	48	100	120	83	74	26	110	62	56
Upper	Downgradient	G33S	Boron, Dissolved	ug/l	G1, GMZ	98	< 10	< 10	< 10	11	< 10	< 10	< 10	15	14	< 10	< 10	< 10	11	< 10	< 10
Upper	Downgradient	G34S	Boron, Dissolved	ug/l	G1, GMZ	98	100	120	110	130	130	130	83	96	94	140	76	120	170	160	97
Upper	Downgradient	G35S	Boron, Dissolved	ug/l	G1, GMZ	98	160	140	140	120	81	97	76	110	100	70	62	51	57	52	26
Upper	Downgradient	G37S	Boron, Dissolved	ug/l	G1, GMZ	98	100	130	110	130	130	150	160	160	180	160	66	40	16	12	26
Upper	Downgradient	G40S	Boron, Dissolved	ug/l	G1, GMZ	98	130	160	190	210	190	240	210	230	230	220	97	86	80	100	98
Upper	Downgradient	G41S	Boron, Dissolved	ug/l	G1, GMZ	98	390	350	440	440	330	330	230	330	380	360	280	260	270	83	77
Upper	Downgradient	G50S	Boron, Dissolved	ug/l	G1, GMZ	98															
Upper	Downgradient	G51S	Boron, Dissolved	ug/l	G1, GMZ	98															
Upper	Compliance	G52S	Boron, Dissolved	ug/L	G1, GMZ	98															
Upper	Compliance	G54S	Boron, Dissolved	ug/L	G1, GMZ	98															
Upper	Downgradient	R03S	Boron, Dissolved	ug/l	G1, GMZ	98	140	130	140	120	97	100	100	110	97	97	92	63	69	47	47
Upper	Downgradient	R42S	Boron, Dissolved	ug/l	G1, GMZ	98	64	70	78	44	17	37	72	92	73	84	62	86	58	78	68
Upper	Downgradient	G119	Boron, total	ug/l	GMZ	200			< 10		< 10	16	14	16	21	20					
Upper	Downgradient	G130	Boron, total	ug/l	GMZ	200			13		83	20	20	17	16	20	23	21	19	18	11
Upper	Downgradient	G15S	Boron, total	ug/l	GMZ	200			420		870	960	600	930	440	660	400	690		1700	1400
Upper	Downgradient	G17S	Boron, total	ug/l	GMZ	200			31		53	39	35	51	50	43	24	55	47	41	< 10
Upper	Downgradient	G18S	Boron, total	ug/l	GMZ	200			640		150	270	57	190	270	92	120	34	250	220	100
Upper	Downgradient	G33S	Boron, total	ug/l	GMZ	200			< 10		< 10	< 10	12	11	11	14	16	16	12	21	< 10
Upper	Downgradient	G34S	Boron, total	ug/l	GMZ	200			100		140	140	88	98	100	150	90	120		220	91
Upper	Downgradient	G35S	Boron, total	ug/l	GMZ	200			120		97	89	89	100	99	78	75	49	60	53	26
Upper	Downgradient	G37S	Boron, total	ug/l	GMZ	200			100		120	29	160	160	160	180	72	35	19	16	15
Upper	Downgradient	G40S	Boron, total	ug/l	GMZ	200			180		180	230	220	180	210	220	95	92	83	100	88
Upper	Downgradient	G41S	Boron, total	ug/l	GMZ	200			440		310	320	250	310	400	360	310	240	280	95	65
Upper	Downgradient	G50S	Boron, total	ug/l	GMZ	200															
Upper	Downgradient	G51S	Boron, total	ug/l	GMZ	200															
Upper	Compliance	G52S	Boron, total	ug/L	GMZ	200															
Upper	Compliance	G54S	Boron, total	ug/L	GMZ	200															
Upper	Downgradient	R03S	Boron, total	ug/l	GMZ	200			130		93	98	120	110	98	180	95	48	70	67	51
Upper	Downgradient	R42S	Boron, total	ug/l	GMZ	200			72		39	36	78	84	82	95	72	90	72	80	61
Upper	Downgradient	G119	Chloride, Dissolved	mg/l	G1, GMZ	87.511	24	83	23	25	26	24	15	23	29	19					
Upper	Downgradient	G130	Chloride, Dissolved	mg/l	G1, GMZ	87.511	29	35	34	32	31	31	34	37	29	33	34	31	38	33	31
Upper	Downgradient	G15S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	290	400	310	490	620	630	350	490	470	430	320	520	890	1100	860
Upper	Downgradient	G17S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	27	32	12	28	22	21	25	29	28	20	14	20	30	9.8	11
Upper	Downgradient	G18S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	20	28	76	46	34	21	17	11	9.8	30	62	45	27	17	19
Upper	Downgradient	G33S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	18	15	15	18	18	16	17	17	17	14	14	19	16	20	16
Upper	Downgradient	G34S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	130	95	75	120	110	81	63	62	100	100	44	140	160	91	54
Upper	Downgradient	G35S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	51	52	44	42	49	47	44	47	44	40	45	24	41	51	24
Upper	Downgradient	G37S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	94	110	61	93	98	41	140	93	100	94	40	34	37	46	42
Upper	Downgradient	G40S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	150	190	180	180	220	220	210	180	170	160	75	74	82	110	120
Upper	Downgradient	G41S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	140	120	150	130	99	87	67	100	140	110	120	98	130	60	55
Upper	Downgradient	G50S	Chloride, Dissolved	mg/l	G1, GMZ	87.511															
Upper	Downgradient	G51S	Chloride, Dissolved	mg/l	G1, GMZ	87.511															
Upper	Compliance	G52S	Chloride, Dissolved	mg/L	G1, GMZ	87.511															
Upper	Compliance	G54S	Chloride, Dissolved	mg/L	G1, GMZ	87.511															
Upper	Downgradient	R03S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	64	80	70	59	59	56	67	60	57	77	90	57	84	55	50
Upper	Downgradient	R42S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	110	99	90	82	58	79	84	91	86	58	45	70	70	67	68
Upper	Downgradient	G119	Chloride, total	mg/l	GMZ	87.51186			22		25	24	15	23	29	19					
Upper	Downgradient	G130	Chloride, total	mg/l	GMZ	87.51186			32		31	30	35	36	30	34	34	31	35	33	32
Upper	Downgradient	G15S	Chloride, total	mg/l	GMZ	87.51186			330		580	610	380	300	400	470	320	540		1100	840
Upper	Downgradient	G17S	Chloride, total	mg/l	GMZ	87.51186			12		23	20	26	30	28	19	14	18	30	9.6	11
Upper	Downgradient	G18S	Chloride, total	mg/l	GMZ	87.51186			81		32	21	14	9.7	9.3	24	57	47	30	14	19
Upper	Downgradient	G33S	Chloride, total	mg/l	GMZ	87.51186			15		20	21	18	17	17	15	14	20	15	21	17
Upper	Downgradient	G34S	Chloride, total	mg/l	GMZ	87.51186			69		110	82	63	71	110	110	58	140	150	95	55
Upper	Downgradient	G35S	Chloride, total	mg/l	GMZ	87.51186			44		50	49	46		44	40	46	22	43	53	25
Upper	Downgradient	G37S	Chloride, total	mg/l	GMZ	87.51186			63		85	41	150	95	110	92	39	33	37	45	43
Upper	Downgradient	G40S	Chloride, total	mg/l	GMZ	87.51186			180		210	220	210	170	160	160	77	50	60	96	190
Upper	Downgradient	G41S	Chloride, total	mg/l	GMZ	87.51186			160		100	86	68	85	130	110	120	97	130	60	57
Upper	Downgradient	G50S	Chloride, total	mg/l	GMZ	87.51186															
Upper	Downgradient	G51S	Chloride, total	mg/l	GMZ	87.51186															
Upper	Compliance	G52S	Chloride, total	mg/L	GMZ	87.51186															
Upper	Compliance	G54S	Chloride, total	mg/L	GMZ	87.51186															
Upper	Downgradient	R03S	Chloride, total	mg/l	GMZ	87.51186			70		56	55	66	64	53	74	90	59	82	58	46
Upper	Downgradient	R42S	Chloride, total	mg/l	GMZ	87.51186			86		66	74	82	93	79	58	45	70	61	66	72

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Upper	Downgradient	G119	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1								
Upper	Downgradient	G130	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				T< 1
Upper	Downgradient	G15S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G17S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G18S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G33S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G34S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				F< 1				< 1
Upper	Downgradient	G35S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G37S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G40S	Ethylbenzene	ug/l	G2, GMZ	5			<Q 1				< 1				< 1				< 1
Upper	Downgradient	G41S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G50S	Ethylbenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G51S	Ethylbenzene	ug/l	G2, GMZ	5															
Upper	Compliance	G52S	Ethylbenzene	ug/L	G2, GMZ	5															
Upper	Compliance	G54S	Ethylbenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	R42S	Ethylbenzene	ug/l	G2, GMZ	5			< 1				< 1				< 1				< 1
Upper	Downgradient	G119	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25					
Upper	Downgradient	G130	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G15S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G17S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G18S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G33S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G34S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G35S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G37S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G40S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G41S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G50S	Fluoride, total	mg/l	GMZ	273.35															
Upper	Downgradient	G51S	Fluoride, total	mg/l	GMZ	273.35															
Upper	Compliance	G52S	Fluoride, total	mg/L	GMZ	273.35															
Upper	Compliance	G54S	Fluoride, total	mg/L	GMZ	273.35															
Upper	Downgradient	R03S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	R42S	Fluoride, total	mg/l	GMZ	273.35			< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G119	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	14	14	16	16	H 13	12	7.9	17	H 19	H 13					
Upper	Downgradient	G130	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	12	12	12	12	12	11	12	13	12	11	12	12	13	12	12
Upper	Downgradient	G15S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.038	0.051	< 0.02	< 0.02	0.034	0.037	< 0.02	10	0.091	H 0.25	< 0.02	H 0.032	0.161	1	0.8
Upper	Downgradient	G17S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	7.3	2.9	1	16	14	14	0.67	1	2.1	1	0.073	H 0.96	0.92	1.7	2.8
Upper	Downgradient	G18S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.58	4	3.6	4.9	6.3	7.3	8.1	2.1	0.71	H 6.1	3.4	H 10	H 0.62	5.8	4.8
Upper	Downgradient	G33S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9.2	H 7.7	8	9.6	9	8.6	8.6	9.1	9.3	8.5	8.3	10	8.7	9.4	8.7
Upper	Downgradient	G34S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	2.5	H 4	5.7	3.2	3.4	6.7	7.6	7.1	4.1	H 4.8	6.8	3	1.8	0.48	4.3
Upper	Downgradient	G35S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.087	0.068	0.31	2.8	1.6	1.7	2.1	4.4	4.9	H 4.2	3.8	1.9	4.3	2	2.9
Upper	Downgradient	G37S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1	H 1.1	2.6	0.83	1.1	6.9	< 0.2	0.17	0.43	H 1	0.61	2.1	4.1	7.4	5.3
Upper	Downgradient	G40S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.4	< 0.2	0.056	< 0.02	0.11	< 0.02	< 0.02	0.13	< 0.02	H 6.8	H 12	H 2.9	1.1	1.5	H 18
Upper	Downgradient	G41S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	H< 0.02	< 0.02	0.034	0.02	0.048	< 0.02	0.04	< 0.02	H 0.13	0.02	0.022	0.038	< 0.02	0.029
Upper	Downgradient	G50S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74															
Upper	Downgradient	G51S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74															
Upper	Compliance	G52S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															
Upper	Compliance	G54S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															
Upper	Downgradient	R03S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.035	H 0.031	0.066	< 0.02	< 0.02	< 0.02	< 0.02	1.6	< 0.02	< 0.02	H 0.35	0.03	0.38	1.1	2.5
Upper	Downgradient	R42S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.035	0.055	0.042	0.035	0.086	0.14	0.091	0.47	< 0.02	< 0.02	0.22	0.12	0.034	< 0.02	< 0.02
Upper	Downgradient	G119	Nitrate as N, total	mg/l	GMZ	11.7389			16		H 16	11	8	16	H 16	H 14					
Upper	Downgradient	G130	Nitrate as N, total	mg/l	GMZ	11.7389			11		12	11	13	13	12	11	11	12	13	12	12
Upper	Downgradient	G15S	Nitrate as N, total	mg/l	GMZ	11.7389			< 0.02		< 0.02	< 0.02	< 0.02	0.14	< 0.02	H< 0.02	< 0.02	0.17	0.205	1	0.78
Upper	Downgradient	G17S	Nitrate as N, total	mg/l	GMZ	11.7389			0.89		12	13	0.6	1	1.5	0.96	0.074	H 0.97	0.88	1.7	2.9
Upper	Downgradient	G18S	Nitrate as N, total	mg/l	GMZ	11.7389			3.7		6.8	7.8	8.2	1.4	0.72	H 4.2	2.4	H 11	H 0.46	7.7	5
Upper	Downgradient	G33S	Nitrate as N, total	mg/l	GMZ	11.7389			7.8		9.7	9.7	9	9.6	9.5	8.8	8.2	10	9.5	10	9.2
Upper	Downgradient	G34S	Nitrate as N, total	mg/l	GMZ	11.7389			5.5		3.5	6.7	7.6	8.8	4.3	H 4.7	8.8	2.9	1.8	0.95	4.4
Upper	Downgradient	G35S	Nitrate as N, total	mg/l	GMZ	11.7389			0.3		1.6	1.6	2.1		4.9	4.2	4	1.4	4.5	1.9	3
Upper	Downgradient	G37S	Nitrate as N, total	mg/l	GMZ	11.7389			2.6		1.1	7.1	0.072	0.2	0.43	H 1	0.59	2.2	4.1	7.1	5.4
Upper	Downgradient	G40S	Nitrate as N, total	mg/l	GMZ	11.7389			0.053		0.18	< 0.02	< 0.02	0.2	0.2	H 7.2	H 12	H 4.7	H 2.3	H 3	2
Upper	Downgradient	G41S	Nitrate as N, total	mg/l	GMZ	11.7389			< 0.02		0.021	0.07	< 0.02	< 0.02	0.98	H 0.2	< 0.02	0.026	0.062	0.4	0.024
Upper	Downgradient	G50S	Nitrate as N, total	mg/l	GMZ	11.7389															
Upper	Downgradient	G51S	Nitrate as N, total	mg/l	GMZ	11.7389															
Upper	Compliance	G52S	Nitrate as N, total	mg/L	GMZ	11.7389															
Upper	Compliance	G54S	Nitrate as N, total	mg/L	GMZ	11.7389															
Upper	Downgradient	R03S	Nitrate as N, total	mg/l	GMZ	11.7389			< 0.02		< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.038	H 0.33	0.077	0.28	2.1	2.3
Upper	Downgradient	R42S	Nitrate as N, total	mg/l	GMZ	11.7389			0.042		< 0.02	0.045	0.044	< 0.02	< 0.02	0.036	0.024	0.46	< 0.02	< 0.02	< 0.02

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	4thQtr04	1stQtr05	2ndQtr05	3rdQtr05	4thQtr05	1stQtr06	2ndQtr06	3rdQtr06	4thQtr06	1stQtr07	2ndQtr07	3rdQtr07	4thQtr07	1stQtr08	2ndQtr08
Upper	Downgradient	G119	Potassium, total	mg/l	GMZ	29.00582			0.92		1.8	2	1	1.7	2.1	1.4					
Upper	Downgradient	G130	Potassium, total	mg/l	GMZ	29.00582			1.2		1.3	1.2	1.2	1.7	1.1	1.2	1.4	1.4	1.3	1.2	1.1
Upper	Downgradient	G15S	Potassium, total	mg/l	GMZ	29.00582			59		100	96	65	110	48	59	44	71		150	130
Upper	Downgradient	G17S	Potassium, total	mg/l	GMZ	29.00582			2.1		4.5	2.3	2.2	3.6	3.6	2.8	1.9	3	3.8	3.6	1.7
Upper	Downgradient	G18S	Potassium, total	mg/l	GMZ	29.00582			82		18	27	7.7	19	24	12	12	4.1	25	37	12
Upper	Downgradient	G33S	Potassium, total	mg/l	GMZ	29.00582			0.8		0.9	1.2	0.83	0.9	0.92	0.72	B 0.79	1	0.82	1.4	0.8
Upper	Downgradient	G34S	Potassium, total	mg/l	GMZ	29.00582			11		15	15	12	11	11	11	9.1	12	13	19	10
Upper	Downgradient	G35S	Potassium, total	mg/l	GMZ	29.00582			21		16	16	13	16	15	14	14	6.2	11	9.6	6
Upper	Downgradient	G37S	Potassium, total	mg/l	GMZ	29.00582			5.4		12	4	11	11	11	12	7.7	3.8	2.9	2	2.2
Upper	Downgradient	G40S	Potassium, total	mg/l	GMZ	29.00582			26		26	28	27	22	24	30	20	17	17	21	38
Upper	Downgradient	G41S	Potassium, total	mg/l	GMZ	29.00582			49		50	38	32	32	36	30	30	26	27	16	10
Upper	Downgradient	G50S	Potassium, total	mg/l	GMZ	29.00582															
Upper	Downgradient	G51S	Potassium, total	mg/l	GMZ	29.00582															
Upper	Compliance	G52S	Potassium, total	mg/L	GMZ	29.00582															
Upper	Compliance	G54S	Potassium, total	mg/L	GMZ	29.00582															
Upper	Downgradient	R03S	Potassium, total	mg/l	GMZ	29.00582			14		12	13	13	14	12	11	11	8.9	8.1	6.5	5.9
Upper	Downgradient	R42S	Potassium, total	mg/l	GMZ	29.00582			1.2		0.6	0.74	1.8	1.6	1.3	1.5	1.4	4.3	1.2	1.3	1.2
Upper	Downgradient	G119	Sodium, total	mg/l	GMZ	164.7897			5		8	9.4	5	8.4	8.5	6.6					
Upper	Downgradient	G130	Sodium, total	mg/l	GMZ	164.7897			12		12	10	12	12	10	11	14	10	12	11	11
Upper	Downgradient	G15S	Sodium, total	mg/l	GMZ	164.7897			140		330	310	180	230	120	180	100	250		610	480
Upper	Downgradient	G17S	Sodium, total	mg/l	GMZ	164.7897			12		15	13	14	18	21	17	9.4	14	14	11	6.3
Upper	Downgradient	G18S	Sodium, total	mg/l	GMZ	164.7897			28		27	17	14	11	9.4	14	36	12	23	16	14
Upper	Downgradient	G33S	Sodium, total	mg/l	GMZ	164.7897			5		5.4	6	6	5.7	5.5	5.4	4.7	5.7	5.2	6	6.2
Upper	Downgradient	G34S	Sodium, total	mg/l	GMZ	164.7897			33		53	42	26	27	32	53	27	50	61	51	23
Upper	Downgradient	G35S	Sodium, total	mg/l	GMZ	164.7897			26		17	17	19	20	18	16	18	34	15	14	11
Upper	Downgradient	G37S	Sodium, total	mg/l	GMZ	164.7897			32		48	15	65	42	48	52	24	10	9.8	13	14
Upper	Downgradient	G40S	Sodium, total	mg/l	GMZ	164.7897			83		87	97	90	68	77	75	42	40	42	48	120
Upper	Downgradient	G41S	Sodium, total	mg/l	GMZ	164.7897			90		74	51	36	41	65	60	58	48	59	26	22
Upper	Downgradient	G50S	Sodium, total	mg/l	GMZ	164.7897															
Upper	Downgradient	G51S	Sodium, total	mg/l	GMZ	164.7897															
Upper	Compliance	G52S	Sodium, total	mg/L	GMZ	164.7897															
Upper	Compliance	G54S	Sodium, total	mg/L	GMZ	164.7897															
Upper	Downgradient	R03S	Sodium, total	mg/l	GMZ	164.7897			28		24	25	27	25	21	24	35	22	28	20	17
Upper	Downgradient	R42S	Sodium, total	mg/l	GMZ	164.7897			70		29	33	75	75	65	68	63	58	56	60	54
Upper	Downgradient	G119	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5								
Upper	Downgradient	G130	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				T< 5
Upper	Downgradient	G15S	Tetrahydrofuran	ug/l	G2, GMZ	42			12				20				< 5				36
Upper	Downgradient	G17S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Upper	Downgradient	G18S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Upper	Downgradient	G33S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				F< 5				< 5
Upper	Downgradient	G34S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				F< 5				< 5
Upper	Downgradient	G35S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Upper	Downgradient	G37S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Upper	Downgradient	G40S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				12				< 5				< 5
Upper	Downgradient	G41S	Tetrahydrofuran	ug/l	G2, GMZ	42			6				< 5				< 5				< 5
Upper	Downgradient	G50S	Tetrahydrofuran	ug/l	G2, GMZ	42															
Upper	Downgradient	G51S	Tetrahydrofuran	ug/l	G2, GMZ	42															
Upper	Compliance	G52S	Tetrahydrofuran	ug/L	G2, GMZ	42															
Upper	Compliance	G54S	Tetrahydrofuran	ug/L	G2, GMZ	42															
Upper	Downgradient	R03S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5
Upper	Downgradient	R42S	Tetrahydrofuran	ug/l	G2, GMZ	42			< 5				< 5				< 5				< 5

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Bedrock	Upgradient	G09D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G13D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G13S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Downgradient	G14D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G20D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		P< 1		< 1		< 1	
Bedrock	Downgradient	G41D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G13D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G13S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Downgradient	G14D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G20D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		P< 1		< 1		< 1	
Bedrock	Downgradient	G41D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		7		11		5.4		11		12		10		1.1	
Bedrock	Upgradient	G09M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		2.6		< 1		2.3		1.3		5.9		4.2		6.4	
Bedrock	Upgradient	G13D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		1.7		3.6	
Bedrock	Upgradient	G13S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		3.6		12		13	
Bedrock	Downgradient	G14D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G20D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		P< 1		< 1		< 1	
Bedrock	Downgradient	G41D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G09M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G13D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	5.8	8.4	15	70	32	25	15	250	200	170	280	23	13	18	15
Bedrock	Upgradient	G13S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.45	0.51	< 0.09	0.16	0.75	0.59	1.1	0.39	1.1	1.7	11	7	6	5.6	6.3
Bedrock	Downgradient	G14D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9															
Bedrock	Downgradient	G16D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	0.34	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G20D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Downgradient	G41D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.5	0.76	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G09D	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	0.41	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G09M	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	1.5	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G13D	Ammonia as N, total	mg/l	GMZ	900	5.8	8	16	68		24	0.98	280	200	150	330	22	15	19	15
Bedrock	Upgradient	G13S	Ammonia as N, total	mg/l	GMZ	900	0.25	0.58	< 0.09	0.15		0.7	15	0.38	1.1	1.7	11	6.1	6	5.5	6.3
Bedrock	Downgradient	G14D	Ammonia as N, total	mg/l	GMZ	900															
Bedrock	Downgradient	G16D	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	0.32	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Upgradient	G20D	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Bedrock	Downgradient	G41D	Ammonia as N, total	mg/l	GMZ	900	0.5	0.78	2.1	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	2.3	< 0.1
Bedrock	Upgradient	G09D	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.1	1.1	1.9	5.5	3.3	2.3	1.9	1.8	2.7	3.2	1.2	4.6	4.4	3.1	3.4
Bedrock	Upgradient	G09M	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.4	1.6	1.9	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.5	< 1
Bedrock	Upgradient	G13D	Arsenic, Dissolved	ug/l	G1, GMZ	2	13	3.8	3.8	12	6.9	9.1	< 1	43	43	19	10	2.4	< 1	2.5	1.9
Bedrock	Upgradient	G13S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.6	7.6	3.9	< 1	1.2	4.5	1.8	< 1	1.8	3.1	4.6	4.1	1.4	5.2	4.7
Bedrock	Downgradient	G14D	Arsenic, Dissolved	ug/l	G1, GMZ	2															
Bedrock	Downgradient	G16D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bedrock	Upgradient	G20D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bedrock	Downgradient	G41D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Bedrock	Upgradient	G09D	Arsenic, total	ug/l	GMZ	10	1	1.2	6.5	7.7	3.2	2.9	< 1	3.2	4.2	6.6	3.6	4.3	5.9	7.2	8.5
Bedrock	Upgradient	G09M	Arsenic, total	ug/l	GMZ	10	1.6	1.5	2	1.1	1.6	< 1	3.4	< 1	1.2	< 1	< 1	< 1	< 1	< 1	5.6
Bedrock	Upgradient	G13D	Arsenic, total	ug/l	GMZ	10	16	16	61	14		67	4.8	58	57	22	61	5.3	8.2	16	18
Bedrock	Upgradient	G13S	Arsenic, total	ug/l	GMZ	10	2.6	5.6	8.4	1.4		3.5	120	< 1	2.9	5.2	12	3.1	1.9	9.8	11
Bedrock	Downgradient	G14D	Arsenic, total	ug/l	GMZ	10															
Bedrock	Downgradient	G16D	Arsenic, total	ug/l	GMZ	10	1.4	1	< 1	2	< 1	< 1	< 1	1.1	< 1	< 1	< 1	< 1	1	1.3	1.9
Bedrock	Upgradient	G20D	Arsenic, total	ug/l	GMZ	10	< 1	1	9.1	< 1	< 1	< 1	14	< 1	< 1	< 1	3.2	< 1	< 1	< 1	4.3
Bedrock	Downgradient	G41D	Arsenic, total	ug/l	GMZ	10	< 1	< 1	2.1	< 1	3.8	1.5	2.1	< 1	1.9	< 1	1	< 1	6.6	< 1	2.2
Bedrock	Upgradient	G09D	Barium, total	ug/l	GMZ	225180.6	660	860	970	800	1100	1000	280	960	1000	1000	1000	1000	940	820	900
Bedrock	Upgradient	G09M	Barium, total	ug/l	GMZ	225180.6	260	240	260	240	290	260	940	290	250	280	270	280	310	270	330
Bedrock	Upgradient	G13D	Barium, total	ug/l	GMZ	225180.6	220	240	330	140		240	290	150	170	150	150	160	260	200	180
Bedrock	Upgradient	G13S	Barium, total	ug/l	GMZ	225180.6	250	240	240	200		300	230	230	280	290	270	170	290	240	220
Bedrock	Downgradient	G14D	Barium, total	ug/l	GMZ	225180.6															
Bedrock	Downgradient	G16D	Barium, total	ug/l	GMZ	225180.6	120	120	200	120	100	110	110	120	100	120	32	120	130	120	130
Bedrock	Upgradient	G20D	Barium, total	ug/l	GMZ	225180.6	79	120	180	86	83	82	350	88	83	79	140	84	72	81	170
Bedrock	Downgradient	G41D	Barium, total	ug/l	GMZ	225180.6	120	110	170	130	220	160	180	140	180	150	160	150	270	150	180
Bedrock	Upgradient	G09D	Boron, Dissolved	ug/l	G1, GMZ	98	42	48	42	44	42	41	46	36	53	46	42	45	62	54	70
Bedrock	Upgradient	G09M	Boron, Dissolved	ug/l	G1, GMZ	98	26	30	21	27	26	28	25	18	33	26	27	27	38	23	25
Bedrock	Upgradient	G13D	Boron, Dissolved	ug/l	G1, GMZ	98	410	340	440	1800	2700	1900	250	7100	8500	6600	5000	950	360	690	480
Bedrock	Upgradient	G13S	Boron, Dissolved	ug/l	G1, GMZ	98	90	100	160	81	100	100	150	93	200	280	440	470	470	410	250
Bedrock	Downgradient	G14D	Boron, Dissolved	ug/l	G1, GMZ	98															
Bedrock	Downgradient	G16D	Boron, Dissolved	ug/l	G1, GMZ	98	12	12	22	13	< 10	< 10	< 10	< 10	< 10	12	23	12	16	< 10	13
Bedrock	Upgradient	G20D	Boron, Dissolved	ug/l	G1, GMZ	98	23	27	25	22	22	23	22	17	26	26	22	25	32	20	26
Bedrock	Downgradient	G41D	Boron, Dissolved	ug/l	G1, GMZ	98	14	23	14	19	18	11	16	11	19	15	18	15	18	17	17
Bedrock	Upgradient	G09D	Boron, total	ug/l	GMZ	200	46	43	48	36	47	38	26	44	38	54	47	46	67	57	66
Bedrock	Upgradient	G09M	Boron, total	ug/l	GMZ	200	30	17	28	20	23	22	41	30	20	31	29	28	26	29	29
Bedrock	Upgradient	G13D	Boron, total	ug/l	GMZ	200	390	320	480	2100		2000	160	7200	8500	7000	6500	1100	400	660	510
Bedrock	Upgradient	G13S	Boron, total	ug/l	GMZ	200	94	110	170	80		330	1100	110	230	290	430	530	470	390	260
Bedrock	Downgradient	G14D	Boron, total	ug/l	GMZ	200															
Bedrock	Downgradient	G16D	Boron, total	ug/l	GMZ	200	23	14	29	17	< 10	15	13	14	11	< 10	19	14	19	33	12
Bedrock	Upgradient	G20D	Boron, total	ug/l	GMZ	200	27	34	62	19	24	28	120	29	28	31	38	36	30	37	63
Bedrock	Downgradient	G41D	Boron, total	ug/l	GMZ	200	26	14	12	16	23	10	18	13	18	17	17	23	17	36	20
Bedrock	Upgradient	G09D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	39	61	97	94	86	100	520	110	130	120	140	140	81	76	65
Bedrock	Upgradient	G09M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	460	450	480	490	450	480	110	540	590	610	560	560	610		600
Bedrock	Upgradient	G13D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	37	67	110	260	180	190	170	830	720	530	350	200	200	220	160
Bedrock	Upgradient	G13S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	150	140	73	77	54	72	67	58	92	110	120	150	170	190	120
Bedrock	Downgradient	G14D	Chloride, Dissolved	mg/l	G1, GMZ	87.511															
Bedrock	Downgradient	G16D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	14	15	41	21	16	16	19	18	19	16	9.9	21	22	22	17
Bedrock	Upgradient	G20D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	21	27	28	24	21	23	18	21	19	27	20	25	17	17	18
Bedrock	Downgradient	G41D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	35	39	43	36	32	35	37	32	34	35	44	35	35	37	40
Bedrock	Upgradient	G09D	Chloride, total	mg/l	GMZ	87.51186	35	58	70	95	90	110	490	110	130	120	130	140	100	85	79
Bedrock	Upgradient	G09M	Chloride, total	mg/l	GMZ	87.51186	460	450	540	520	470	610	100	580	590	620	620	630	600	640	610
Bedrock	Upgradient	G13D	Chloride, total	mg/l	GMZ	87.51186	32	64	110	290	200	190	170	770	730	520	350	210	190	210	180
Bedrock	Upgradient	G13S	Chloride, total	mg/l	GMZ	87.51186	160	140	75	82	55	71	70	56	98	100	120	150	170	200	120
Bedrock	Downgradient	G14D	Chloride, total	mg/l	GMZ	87.51186															
Bedrock	Downgradient	G16D	Chloride, total	mg/l	GMZ	87.51186	14	15	40	18	17	16	17	18	19	18	5.8	22	20	22	18
Bedrock	Upgradient	G20D	Chloride, total	mg/l	GMZ	87.51186	22	26	28	24	23	24	22	22	21	25	22	22	21	20	15
Bedrock	Downgradient	G41D	Chloride, total	mg/l	GMZ	87.51186	32	23	45	38	33	36	37	34	32	34	34	37	34	33	39

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Bedrock	Upgradient	G09D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09M	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G13D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G13S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Downgradient	G14D	Ethylbenzene	ug/l	G2, GMZ	5															
Bedrock	Downgradient	G16D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G20D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		P< 1		< 1		< 1	
Bedrock	Downgradient	G41D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Bedrock	Upgradient	G09D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	0.26	0.31	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.25	0.31	< 0.25
Bedrock	Upgradient	G09M	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.29	< 0.25
Bedrock	Upgradient	G13D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 2.5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.28	< 0.25
Bedrock	Upgradient	G13S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.26	< 0.25
Bedrock	Downgradient	G14D	Fluoride, total	mg/l	GMZ	273.35															
Bedrock	Downgradient	G16D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.38	< 0.25	< 0.25	0.42	0.26	< 0.25	0.26	< 0.25	< 0.25	0.38	0.29
Bedrock	Upgradient	G20D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.33	< 0.25
Bedrock	Downgradient	G41D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.25	< 0.25	< 0.25	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.252
Bedrock	Upgradient	G09D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	0.053	< 0.02	< 0.02	0.059	< 0.02	0.16	< 0.02	0.044	< 0.02	0.039	< 0.02	< 0.02		0.07
Bedrock	Upgradient	G09M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	0.03	< 0.02	< 0.02	0.059	< 0.02	0.029	< 0.02	0.045	0.068	0.034	< 0.02	< 0.02		< 0.02
Bedrock	Upgradient	G13D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.075	0.022	< 0.2	0.73	< 0.02	H 0.029	< 0.02	0.05	0.1	< 0.02
Bedrock	Upgradient	G13S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.02	< 0.02	0.031	< 0.02	0.081	< 0.02	< 0.02	0.037	< 0.02	H 0.032	< 0.02	0.04	0.07	< 0.02
Bedrock	Downgradient	G14D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74															
Bedrock	Downgradient	G16D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	4.6	4.8	9.8	6.3	4.9	5.6	5.4	6.6	7.1	5.2	1.7	8.1	8.1	8.1	6
Bedrock	Upgradient	G20D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	3.8	3.5	3.1	4	3.4	3.9	2.9	3	2.8	4.1	3.4	3.5	3.2	2.6	2.8
Bedrock	Downgradient	G41D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	8.5	8.2	11	11	9.2	10	9.9	8.8	9	10	9.7	9.8	9.7	8.6	10
Bedrock	Upgradient	G09D	Nitrate as N, total	mg/l	GMZ	11.7389	< 0.02	0.049	0.058	< 0.02	0.059	< 0.02	0.033	< 0.02	< 0.02	< 0.02	0.039	< 0.02	< 0.02	0.16	< 0.02
Bedrock	Upgradient	G09M	Nitrate as N, total	mg/l	GMZ	11.7389	< 0.02	0.031	< 0.02	< 0.02	0.062	< 0.02	0.032	< 0.02	0.044	0.068	0.029	< 0.02	< 0.02	< 0.02	< 0.02
Bedrock	Upgradient	G13D	Nitrate as N, total	mg/l	GMZ	11.7389	H< 0.02	< 0.02	< 0.02	0.028	0.059	0.066	< 0.02	< 0.2	0.72	< 0.02	H 0.029	< 0.02	0.43	0.09	< 0.02
Bedrock	Upgradient	G13S	Nitrate as N, total	mg/l	GMZ	11.7389	< 0.02	0.12	< 0.02	< 0.02	0.064	0.08	0.022	< 0.02	< 0.02	0.24	H 0.032	< 0.02	0.41	0.07	< 0.02
Bedrock	Downgradient	G14D	Nitrate as N, total	mg/l	GMZ	11.7389															
Bedrock	Downgradient	G16D	Nitrate as N, total	mg/l	GMZ	11.7389	4.5	4.9	9.6	6.3	5.8	5.6	5.2	6.3	7.2	4.9	1.6	7.9	8.1	8.7	6.4
Bedrock	Upgradient	G20D	Nitrate as N, total	mg/l	GMZ	11.7389	3.4	3.4	2.9	4	4.2	4	3.1	3	2.9	3.7	3.5	3.4	3.3	2.9	2.6
Bedrock	Downgradient	G41D	Nitrate as N, total	mg/l	GMZ	11.7389	9.2	5.3	9.7	12	9.5	10	8.5	8.9	9.2	9.5	9.8	10	9.6	9.3	10
Bedrock	Upgradient	G09D	Potassium, total	mg/l	GMZ	29.00582	0.59	0.5	0.64	0.59	0.72	0.51	0.92	0.57	0.4	0.59	0.55	0.51	0.43	0.29	0.5
Bedrock	Upgradient	G09M	Potassium, total	mg/l	GMZ	29.00582	1	0.95	0.93	0.89	0.9	0.8	0.59	0.88	0.79	0.86	0.78	0.83	0.83	0.79	0.9
Bedrock	Upgradient	G13D	Potassium, total	mg/l	GMZ	29.00582	40	37	85	190		140	7.2	340	330	270	230	79	98	87	81
Bedrock	Upgradient	G13S	Potassium, total	mg/l	GMZ	29.00582	6.6	8.4	6.1	5.1		7.6	79	5.7	6.8	8	20	45	19	18	21
Bedrock	Downgradient	G14D	Potassium, total	mg/l	GMZ	29.00582															
Bedrock	Downgradient	G16D	Potassium, total	mg/l	GMZ	29.00582	2	1.6	2.5	1.8	1.6	1.4	1.4	2.2	1.4	2	5.3	1.9	2.1	2	2.5
Bedrock	Upgradient	G20D	Potassium, total	mg/l	GMZ	29.00582	2.1	3.5	10	2.4	2.3	1.9	16	2.9	2.5	2.5	6.4	3.5	2.1	3.5	11
Bedrock	Downgradient	G41D	Potassium, total	mg/l	GMZ	29.00582	1.6	1.8	1.6	1.3	1.9	1.4	1.7	1.3	1.4	1.2	2.8	1.4	1.8	4.2	1.6
Bedrock	Upgradient	G09D	Sodium, total	mg/l	GMZ	164.7897	20	22	35	36	45	51	220	56	70	77	81	83	61	56	50
Bedrock	Upgradient	G09M	Sodium, total	mg/l	GMZ	164.7897	190	190	210	210	220	200	55	240	240	250	250	260	250	240	270
Bedrock	Upgradient	G13D	Sodium, total	mg/l	GMZ	164.7897	29	62	72	220		160	52	730	610	500	450	92	44	65	63
Bedrock	Upgradient	G13S	Sodium, total	mg/l	GMZ	164.7897	120	100	53	79		69	120	50	67	76	78	76	60	52	29
Bedrock	Downgradient	G14D	Sodium, total	mg/l	GMZ	164.7897															
Bedrock	Downgradient	G16D	Sodium, total	mg/l	GMZ	164.7897	5.2	4.8	14	5	6.5	5.5	5.8	5.2	5.4	5.6	6.6	5.6	5.6	5.9	5.6
Bedrock	Upgradient	G20D	Sodium, total	mg/l	GMZ	164.7897	8.1	7.6	6.5	6.8	7.8	8.5	6.7	7.8	6.9	8.9	7	7.4	8	7.2	8.6
Bedrock	Downgradient	G41D	Sodium, total	mg/l	GMZ	164.7897	10	10	12	11	11	13	12	11	12	11	12	13	12	16	14
Bedrock	Upgradient	G09D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Bedrock	Upgradient	G09M	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		9.3		< 2.5		< 2.5		< 2.5		< 2		< 2	
Bedrock	Upgradient	G13D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 20		110		< 2.5		63		24		15		< 2	
Bedrock	Upgradient	G13S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 20		3.8		< 2.5		< 2.5		< 2.5		< 2		< 2	
Bedrock	Downgradient	G14D	Tetrahydrofuran	ug/l	G2, GMZ	42															
Bedrock	Downgradient	G16D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Bedrock	Upgradient	G20D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		P< 2.5		< 2		< 2	
Bedrock	Downgradient	G41D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G03M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G16M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G18D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G33D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Lower	Downgradient	G34D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G35D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G36S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G37D	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G38S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G39S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1													
Lower	Downgradient	G41M	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G52M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G54M	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5				< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G03M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G16M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G18D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G33D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Lower	Downgradient	G34D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G35D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G36S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G37D	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G38S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G39S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1													
Lower	Downgradient	G41M	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G52M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G54M	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5				< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G03M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G16M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G18D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G33D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Lower	Downgradient	G34D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G35D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G36S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G37D	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G38S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G39S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1													
Lower	Downgradient	G41M	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G52M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G54M	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5				1.5		1.9		1.4		1.7		< 1			
Lower	Downgradient	G03M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G16M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G18D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	4.7	7.3	11	11	14	11	4	5.6	2.3	1.9	1	1			
Lower	Downgradient	G33D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09		< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G34D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.28	0.81	2.7	4.2	6	Q 7.1	5.6	2.9	3.1	3	5.8	2.6	2.2	1.9	1.5
Lower	Downgradient	G35D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.8	0.97	0.74	2.2	2.8	1.8	4.8	3.4	0.4	0.31	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G36S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G37D	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.4	2	2.1	2.1		1.7	1.7	0.99	0.48	< 0.09	0.44	0.49			
Lower	Downgradient	G38S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	43	38	16	15	16	8.6	7.8	4.5	1.2	0.22	< 0.09	0.93	0.59	0.38	< 0.1
Lower	Compliance	G39S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.25	0.11	< 0.09												
Lower	Downgradient	G41M	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	0.17	0.11	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	2.3	3.6	2.3	1.5	1.7	0.28	0.18
Lower	Compliance	G52M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9						< 0.09	< 0.09	< 0.09	0.52	0.39	0.46	0.33	1.2	1	0.87
Lower	Compliance	G54M	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															< 0.1
Lower	Compliance	R39S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9				< 0.09	5.5	21	25	42	40	27	3	15	12		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G03M	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.09	< 0.09	< 0.09	< 0.09	0.13	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G16M	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G18D	Ammonia as N, total	mg/l	GMZ	900	4.6	7	10	11	14	9.9	4	5.1	2.2	0.83	1.2	0.97			
Lower	Downgradient	G33D	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09		< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G34D	Ammonia as N, total	mg/l	GMZ	900	0.41	0.88	2.4	4.4	4.5	6.7	4.7	2.8	2.9	3.1	2.9	2.4	2	1.8	1.3
Lower	Downgradient	G35D	Ammonia as N, total	mg/l	GMZ	900	1.8	0.96	0.82	2.2	2.6	1.7	4.8	3.3	0.4	0.34	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G36S	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	2	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Lower	Downgradient	G37D	Ammonia as N, total	mg/l	GMZ	900	1.3	2	1.6	2.1		1.7	1.2	0.87	0.43	< 0.09	0.31	0.51			
Lower	Downgradient	G38S	Ammonia as N, total	mg/l	GMZ	900	40	38	15	14	16	8.6	5.5	4.7	1.2	< 0.09	< 0.09	1.1	0.78	0.35	< 0.1
Lower	Compliance	G39S	Ammonia as N, total	mg/l	GMZ	900	0.27	0.13	< 0.09												
Lower	Downgradient	G41M	Ammonia as N, total	mg/l	GMZ	900	0.098	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	2	3.6	5.9	1.5	1.4	0.3	0.18
Lower	Compliance	G52M	Ammonia as N, total	mg/L	GMZ	900						< 0.09	< 0.09	< 0.09	0.51	0.4	0.43	< 0.1	1.1	0.99	0.83
Lower	Compliance	G54M	Ammonia as N, total	mg/L	GMZ	900															< 0.1
Lower	Compliance	R39S	Ammonia as N, total	mg/L	GMZ	900				< 0.09	5	22	11	15	36	28	17	16	11		
Lower	Downgradient	G03M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G16M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G18D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1			
Lower	Downgradient	G33D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G34D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G35D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G36S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Downgradient	G37D	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	1.4	< 1	< 1			
Lower	Downgradient	G38S	Arsenic, Dissolved	ug/l	G1, GMZ	2	2	2.1	1.5	2	1.9	2.4	1.2	1.2	< 1	1.2	< 1	< 1	< 1	< 1	< 1
Lower	Compliance	G39S	Arsenic, Dissolved	ug/l	G1, GMZ	2	3.6	3.5	2.2												
Lower	Downgradient	G41M	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.2	< 1	< 1	< 1	< 1	< 1
Lower	Compliance	G52M	Arsenic, Dissolved	ug/L	G1, GMZ	2						1.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Compliance	G54M	Arsenic, Dissolved	ug/L	G1, GMZ	2															< 1
Lower	Compliance	R39S	Arsenic, Dissolved	ug/L	G1, GMZ	2				2.6	4.6	2.2	3.6	2	1.9	2	1.4	< 1	< 1		
Lower	Downgradient	G03M	Arsenic, total	ug/l	GMZ	10	1.5	< 1	5.7	< 1	< 1	< 1	1.2	1.5	1.5	< 1	6.8	< 1	< 1	1.6	14
Lower	Downgradient	G16M	Arsenic, total	ug/l	GMZ	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.6
Lower	Downgradient	G18D	Arsenic, total	ug/l	GMZ	10	1.5	1.6	7.8	4.6	1.8	2.4	< 1	9.5	1.5	2.8	24	4.2			
Lower	Downgradient	G33D	Arsenic, total	ug/l	GMZ	10	4.8	1.4	5.5	5.2	3.2	< 1	2	3.1	1.5		19	11	1.5	1.2	21
Lower	Downgradient	G34D	Arsenic, total	ug/l	GMZ	10	7	1	15	5.2	< 1	< 1	2	1.1	< 1	< 1	2.5	< 1	< 1	< 1	3.7
Lower	Downgradient	G35D	Arsenic, total	ug/l	GMZ	10	11	2.8	160	43	32	1.3	26	12	12	5	2.1	13	2.2	2.6	21
Lower	Downgradient	G36S	Arsenic, total	ug/l	GMZ	10	< 1	< 1	2.8	< 1	< 1	< 1	1.1	< 1	1	< 1	2.1	< 1	< 1	< 1	< 1
Lower	Downgradient	G37D	Arsenic, total	ug/l	GMZ	10	1.1	< 1	3.4	< 1		< 1	2.7	< 1	< 1	< 1	1.6	< 1			
Lower	Downgradient	G38S	Arsenic, total	ug/l	GMZ	10	2.2	2	4.8	2.1	5.2	2.6	5.9	2.1	1	1.2	12	4.3	2.7	16	14
Lower	Compliance	G39S	Arsenic, total	ug/l	GMZ	10	38	36	79												
Lower	Downgradient	G41M	Arsenic, total	ug/l	GMZ	10	5.9	2.8	18	5.5	9.8	22	31	12	14	2.5	9.7	6.7	11	1.9	1.1
Lower	Compliance	G52M	Arsenic, total	ug/L	GMZ	10						2	1.3	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lower	Compliance	G54M	Arsenic, total	ug/L	GMZ	10															< 1
Lower	Compliance	R39S	Arsenic, total	ug/L	GMZ	10				3.5	11	5.2	54	130	98	2.3	5	1.4	1.9		
Lower	Downgradient	G03M	Barium, total	ug/l	GMZ	225180.6	160	150	220	130	160	150	150	150	140	140	220	140	140	140	290
Lower	Downgradient	G16M	Barium, total	ug/l	GMZ	225180.6	170	180	110	150	140	150	140	130	120	130	120	120	110	120	150
Lower	Downgradient	G18D	Barium, total	ug/l	GMZ	225180.6	97	120	190	140	120	130	96	170	74	96	370	110			
Lower	Downgradient	G33D	Barium, total	ug/l	GMZ	225180.6	130	110	120	130	120	110	120	120	110		200	160	110	110	210
Lower	Downgradient	G34D	Barium, total	ug/l	GMZ	225180.6	160	91	260	170	85	92	120	88	69	68	100	64	65	69	120
Lower	Downgradient	G35D	Barium, total	ug/l	GMZ	225180.6	230	180	1500	460	350	200	310	270	220	190	130	210	170	160	290
Lower	Downgradient	G36S	Barium, total	ug/l	GMZ	225180.6	220	220	270	220	220	240	240	230	230	220	240	220	220	220	220
Lower	Downgradient	G37D	Barium, total	ug/l	GMZ	225180.6	74	66	110	70		61	78	56	52	44	64	46			
Lower	Downgradient	G38S	Barium, total	ug/l	GMZ	225180.6	570	760	550	470	540	450	560	480	290	250	370	400	350	410	410
Lower	Compliance	G39S	Barium, total	ug/l	GMZ	225180.6	760	640	1400												
Lower	Downgradient	G41M	Barium, total	ug/l	GMZ	225180.6	140	140	130	120	120	120	110	120	170	230	230	170	180	150	150
Lower	Compliance	G52M	Barium, total	ug/L	GMZ	225180.6						68	65	48	52	51	61	40	53	48	49
Lower	Compliance	G54M	Barium, total	ug/L	GMZ	225180.6															85
Lower	Compliance	R39S	Barium, total	ug/L	GMZ	225180.6				130	280	280	1200	1700	1600	240	200	170	170		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G03M	Boron, Dissolved	ug/l	G1, GMZ	98	21	28	24	21	22	21	18	12	26	20	20	22	31	19	18
Lower	Downgradient	G16M	Boron, Dissolved	ug/l	G1, GMZ	98	19	20	16	19	15	13	10	< 10	10	12	13	10	24	15	15
Lower	Downgradient	G18D	Boron, Dissolved	ug/l	G1, GMZ	98	130	120	100	89	85	62	56	31	33	32	28	21			
Lower	Downgradient	G33D	Boron, Dissolved	ug/l	G1, GMZ	98	10	14	< 10	14	< 10	< 10	< 10	< 10	< 10		< 10	11	11	14	14
Lower	Downgradient	G34D	Boron, Dissolved	ug/l	G1, GMZ	98	160	150	110	97	84	62	52	36	29	24	27	34	36	24	31
Lower	Downgradient	G35D	Boron, Dissolved	ug/l	G1, GMZ	98	32	28	29	42	33	34	40	17	37	28	32	< 10	22	16	< 10
Lower	Downgradient	G36S	Boron, Dissolved	ug/l	G1, GMZ	98	16	16	14	12	10	12	14	< 10	22	14	15	14	21	12	12
Lower	Downgradient	G37D	Boron, Dissolved	ug/l	G1, GMZ	98	52	58	50	41		25	21	14	30	21	20	14			
Lower	Downgradient	G38S	Boron, Dissolved	ug/l	G1, GMZ	98	180	220	130	130	120	120	100	85	100	82	33	45	110	410	25
Lower	Compliance	G39S	Boron, Dissolved	ug/l	G1, GMZ	98	200	360	320												
Lower	Downgradient	G41M	Boron, Dissolved	ug/l	G1, GMZ	98	30	70	22	26	29	18	23	27	48	65	67	30	35	23	25
Lower	Compliance	G52M	Boron, Dissolved	ug/L	G1, GMZ	98						46	50	36	57	39	25	29	35	24	28
Lower	Compliance	G54M	Boron, Dissolved	ug/L	G1, GMZ	98															< 10
Lower	Compliance	R39S	Boron, Dissolved	ug/L	G1, GMZ	98				380	420	350	360	340	220	130	77	68	71		
Lower	Downgradient	G03M	Boron, total	ug/l	GMZ	200	26	16	36	16	23	19	27	22	15	25	41	22	17	23	53
Lower	Downgradient	G16M	Boron, total	ug/l	GMZ	200	24	20	19	20	< 10	31	15	12	< 10	< 10	16	13	18	22	20
Lower	Downgradient	G18D	Boron, total	ug/l	GMZ	200	130	120	130	93	78	67	52	60	36	36	99	42			
Lower	Downgradient	G33D	Boron, total	ug/l	GMZ	200	22	< 10	20	20	< 10	< 10	14	25	15		23	26	21	22	31
Lower	Downgradient	G34D	Boron, total	ug/l	GMZ	200	180	130	160	110	75	62	55	52	36	23	30	35	37	31	38
Lower	Downgradient	G35D	Boron, total	ug/l	GMZ	200	42	25	180	85	52	34	52	40	34	26	26	19	21	23	32
Lower	Downgradient	G36S	Boron, total	ug/l	GMZ	200	20	< 10	17	10	< 10	14	15	15	< 10	15	20	22	11	19	15
Lower	Downgradient	G37D	Boron, total	ug/l	GMZ	200	65	47	61	41		23	28	22	25	16	20	19			
Lower	Downgradient	G38S	Boron, total	ug/l	GMZ	200	160	200	140	120	130	120	100	87	97	71	48	60	100	72	30
Lower	Compliance	G39S	Boron, total	ug/l	GMZ	200	340	440	470												
Lower	Downgradient	G41M	Boron, total	ug/l	GMZ	200	39	65	19	20	27	18	22	34	45	66	66	35	26	23	27
Lower	Compliance	G52M	Boron, total	ug/L	GMZ	200						40	50	37	48	39	30	24	26	28	30
Lower	Compliance	G54M	Boron, total	ug/L	GMZ	200															11
Lower	Compliance	R39S	Boron, total	ug/L	GMZ	200				360	400	360	480	610	500	110	74	67	58		
Lower	Downgradient	G03M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	43	42	50	42	41	35	36	37	38	37	35	37	39		40
Lower	Downgradient	G16M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	35	37	18	38	38	38	32	27	27	26	26	41	32	25	27
Lower	Downgradient	G18D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	56	51	53	53	52	38	52	41	27	28	27	38			
Lower	Downgradient	G33D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	18	22	25	28	35	30	25	26	25		22	22	25	28	24
Lower	Downgradient	G34D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	74	60	53	54	51	46	44	40	30	24	25	29	28	3.1	26
Lower	Downgradient	G35D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	44	46	56	62	44	47	36	33	26	28	26	38	27	25	27
Lower	Downgradient	G36S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	38	42	43	46	47	43	48	50	43	46	47	46	46	46	47
Lower	Downgradient	G37D	Chloride, Dissolved	mg/l	G1, GMZ	87.511	37	40	54	48		32	31	30	25	5.7	18	16			
Lower	Downgradient	G38S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	100	130	65	64	76	65	95	180	29	32	40	140	66	39	36
Lower	Compliance	G39S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	140	250	260												
Lower	Downgradient	G41M	Chloride, Dissolved	mg/l	G1, GMZ	87.511	39	45	43	42	39	37	40	62	41	57	51	44	45	39	40
Lower	Compliance	G52M	Chloride, Dissolved	mg/L	G1, GMZ	87.511						54	45	31	28	25	15	17	18		15
Lower	Compliance	G54M	Chloride, Dissolved	mg/L	G1, GMZ	87.511															17
Lower	Compliance	R39S	Chloride, Dissolved	mg/L	G1, GMZ	87.511				< 1	250	160	160	130	59	60	48	130	48		
Lower	Downgradient	G03M	Chloride, total	mg/l	GMZ	87.51186	43	44	43	43	41	37	39	37	37	39	36	38	35	41	38
Lower	Downgradient	G16M	Chloride, total	mg/l	GMZ	87.51186	35	36	18	40	41	40	34	28	27	22	26	39	31	26	23
Lower	Downgradient	G18D	Chloride, total	mg/l	GMZ	87.51186	58	51	54	61	52	37	50	40	30	27	30	37			
Lower	Downgradient	G33D	Chloride, total	mg/l	GMZ	87.51186	18	22	25	28	34	30	34	24	25		22	24	23	27	25
Lower	Downgradient	G34D	Chloride, total	mg/l	GMZ	87.51186	75	64	56	58	51	46	45	44	32	25	25	29	27	28	27
Lower	Downgradient	G35D	Chloride, total	mg/l	GMZ	87.51186	44	47	58	62	45	52	36	34	27	29	26	38	31	26	29
Lower	Downgradient	G36S	Chloride, total	mg/l	GMZ	87.51186	38	41	42	50	47	46	47	48	45	47	47	47	45	45	43
Lower	Downgradient	G37D	Chloride, total	mg/l	GMZ	87.51186	39	41	43	46		33	31	32	25	13	22	17			
Lower	Downgradient	G38S	Chloride, total	mg/l	GMZ	87.51186	99	140	65	59	75	68	80	180	45	32	34	160	73	39	46
Lower	Compliance	G39S	Chloride, total	mg/l	GMZ	87.51186	210	230	260												
Lower	Downgradient	G41M	Chloride, total	mg/l	GMZ	87.51186	39	42	51	42	39	38	42	65	43	52	51	43	44	40	38
Lower	Compliance	G52M	Chloride, total	mg/L	GMZ	87.51186						55	45	30	28	25	15	21	16	17	15
Lower	Compliance	G54M	Chloride, total	mg/L	GMZ	87.51186															14
Lower	Compliance	R39S	Chloride, total	mg/L	GMZ	87.51186				< 1	240	160	170	120	64	55	47	44	46		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G03M	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G16M	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G18D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G33D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Lower	Downgradient	G34D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G35D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G36S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Downgradient	G37D	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G38S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G39S	Ethylbenzene	ug/l	G2, GMZ	5		< 1													
Lower	Downgradient	G41M	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G52M	Ethylbenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Lower	Compliance	G54M	Ethylbenzene	ug/L	G2, GMZ	5															
Lower	Compliance	R39S	Ethylbenzene	ug/L	G2, GMZ	5				< 1		< 1		< 1		< 1		< 1			
Lower	Downgradient	G03M	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 2.5	< 2.5	< 2.5	0.253
Lower	Downgradient	G16M	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.27	0.26	0.38	0.29
Lower	Downgradient	G18D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.34	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25			
Lower	Downgradient	G33D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.38	< 0.25	< 0.25	0.42	< 0.25		< 0.25	< 0.25	0.25	0.37	0.282
Lower	Downgradient	G34D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.34	< 0.25	< 0.25	0.39	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.32	< 0.25
Lower	Downgradient	G35D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.37	< 0.25	0.44	0.4	< 0.25	< 0.25	< 0.25	< 0.25	0.26	< 0.25	0.289
Lower	Downgradient	G36S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	0.3	< 0.25	0.36	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Downgradient	G37D	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	0.26	< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25			
Lower	Downgradient	G38S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	0.3	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Lower	Compliance	G39S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25												
Lower	Downgradient	G41M	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 2.5	< 0.25	0.25
Lower	Compliance	G52M	Fluoride, total	mg/L	GMZ	273.35						< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 2.5	< 0.25
Lower	Compliance	G54M	Fluoride, total	mg/L	GMZ	273.35															0.273
Lower	Compliance	R39S	Fluoride, total	mg/L	GMZ	273.35				< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25		
Lower	Downgradient	G03M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	10	9.2	12	9.6	8.2	7.8	8.2	7.8	7.7	H 7.1	8.3	9.3	8.8		10
Lower	Downgradient	G16M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	10	11	6.3	7.8	9.9	9.9	6.1	10	10	9.6	6.9	2.5	4.4	3.9	4.5
Lower	Downgradient	G18D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	3.3	3.2	3.5	3.1	H 3.5	4.4	H 8.2	6	6.6	H 5	5.4	5.5			
Lower	Downgradient	G33D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9	10	11	12	H 12	12	10	11	12		10	11	11	8	8.7
Lower	Downgradient	G34D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	6.9	7	8.3	7.8	H 6.6	6.8	7.7	7.1	3	2.3	3.4	4.9	3.8	0.34	4.5
Lower	Downgradient	G35D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9.5	8.6	8.3	7.6	H 8.4	5	5.9	5.7	7.3	5	6.3	5.3	8.7	5.9	7.5
Lower	Downgradient	G36S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	12	12	13	12	H 13	11	13	12	11	11	12	12	11	12	11
Lower	Downgradient	G37D	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	9.1	9.8	9.2	10		9	9.3	7.8	2.9	1.1	1.7	1.8			
Lower	Downgradient	G38S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.98	H 0.29	0.58	0.13	0.37	0.074	0.15	0.047	0.23	0.32	1.9	0.72	0.48	1.4	1.9
Lower	Compliance	G39S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	0.18	< 0.02	0.1												
Lower	Downgradient	G41M	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	5.4	3.3	6.5	5.8	5.8	6.8	8.4	6.5	7	5.2	7.3	9.5	7.8	9.4	9.2
Lower	Compliance	G52M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74						5.3	8.9	8.4	H 4.9	4.4	1.8	2.1	1.3		1.3
Lower	Compliance	G54M	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															2.9
Lower	Compliance	R39S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74				0.037	< 0.02	0.09	< 0.2	0.087	0.048	H 0.089	0.36	0.36	0.04		
Lower	Downgradient	G03M	Nitrate as N, total	mg/l	GMZ	11.7389	10	9.5	11	9.9	7.5	8.2	8	7.9	8.1	7.7	7.8	9	9.1	10	10
Lower	Downgradient	G16M	Nitrate as N, total	mg/l	GMZ	11.7389	10	11	6.4	8.9	10	10	6.4	11	10	8.7	7.1	2.3	4.5	3.9	4.4
Lower	Downgradient	G18D	Nitrate as N, total	mg/l	GMZ	11.7389	3.1	3.1	7.8	3.1	3.7	4.3	H 8.2	5.8	7.4	H 4.3	5.8	5.4			
Lower	Downgradient	G33D	Nitrate as N, total	mg/l	GMZ	11.7389	9	10	11	12	H 12	12	13	11	12		10	11	11	8	8.2
Lower	Downgradient	G34D	Nitrate as N, total	mg/l	GMZ	11.7389	6.9	7.3	8.8	8.2	H 7.1	6.9	8.2	7.1	4	2.7	3.1	4.4	4.6	4.5	5
Lower	Downgradient	G35D	Nitrate as N, total	mg/l	GMZ	11.7389	9.7	8.8	8.7	7.7	H 8.5	5.1	5.8	5.9	7.6	5.2	6.3	5.2	6.6	7.2	7.1
Lower	Downgradient	G36S	Nitrate as N, total	mg/l	GMZ	11.7389	12	12	13	13	H 13	12	12	12	12	12	12	12	11	12	11
Lower	Downgradient	G37D	Nitrate as N, total	mg/l	GMZ	11.7389	7.5	9.9	10	11		9.1	9.2	7.9	3.2	1.9	4.3	1.8			
Lower	Downgradient	G38S	Nitrate as N, total	mg/l	GMZ	11.7389	0.7	0.26	2.4	0.44	0.2	0.07	5.5	0.048	0.49	0.42	H 2	0.41	0.35	0.82	2.3
Lower	Compliance	G39S	Nitrate as N, total	mg/l	GMZ	11.7389	0.079	0.051	0.21												
Lower	Downgradient	G41M	Nitrate as N, total	mg/l	GMZ	11.7389	5.3	3.5	4.9	6.4	5.6	6.7	8.6	6.6	6.8	4.9	7.4	9.8	8	9.5	9.5
Lower	Compliance	G52M	Nitrate as N, total	mg/L	GMZ	11.7389						5.3	9	8.6	H 4.8	4.2	1.8	2.2	1.3	1.3	1.3
Lower	Compliance	G54M	Nitrate as N, total	mg/L	GMZ	11.7389															2.8
Lower	Compliance	R39S	Nitrate as N, total	mg/L	GMZ	11.7389				0.027	0.092	0.12	< 0.2	< 0.02	< 0.02	H 0.22	0.6	0.36	0.06		

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Lower	Downgradient	G03M	Potassium, total	mg/l	GMZ	29.00582	2.5	2.4	4.7	2.2	2.5	2.6	2.5	3.2	2.4	2.4	3.6	2.5	2.4	2.4	4.6
Lower	Downgradient	G16M	Potassium, total	mg/l	GMZ	29.00582	1.9	1.9	1.7	1.6	1.6	1.8	1.3	1.1	1.1	1.2	1.4	1.5	1.1	1.3	3.6
Lower	Downgradient	G18D	Potassium, total	mg/l	GMZ	29.00582	7.8	9.3	13	13	12	11	9.2	11	5.7	6.4	14	6.1			
Lower	Downgradient	G33D	Potassium, total	mg/l	GMZ	29.00582	2.2	1.1	2	2.2	1.7	1	1.5	1.6	1.2		5	3.8	1.4	1.2	6.5
Lower	Downgradient	G34D	Potassium, total	mg/l	GMZ	29.00582	8.3	5.8	13	12	7.6	7.6	8.6	6.7	5.9	5.7	7.2	5.1	4.3	4.3	7.8
Lower	Downgradient	G35D	Potassium, total	mg/l	GMZ	29.00582	5.8	3.9	28	12	10	4.4	8.2	7.6	5.4	4	3	3.7	1.7	1.7	6.3
Lower	Downgradient	G36S	Potassium, total	mg/l	GMZ	29.00582	1.4	1.3	3	1.7	1.6	1.5	1.4	1.4	1.3	1.3	1.8	1.3	1.2	1.3	1.7
Lower	Downgradient	G37D	Potassium, total	mg/l	GMZ	29.00582	5.1	4.6	7.5	5.1		4.3	5.1	4.1	3.3	4.1	4	2.7			
Lower	Downgradient	G38S	Potassium, total	mg/l	GMZ	29.00582	21	23	16	14	16	12	12	10	8.2	6.9	5.4	6.6	6.4	6	3.2
Lower	Compliance	G39S	Potassium, total	mg/l	GMZ	29.00582	16	13	17												
Lower	Downgradient	G41M	Potassium, total	mg/l	GMZ	29.00582	3.8	4.2	3.9	3.4	3.2	2.9	2.7	2.9	5.8	5.9	6	3.1	3.3	2.2	2.1
Lower	Compliance	G52M	Potassium, total	mg/L	GMZ	29.00582						4.4	3.4	2.8	3.4	3.4	4.2	2.7	3.7	3.6	3.7
Lower	Compliance	G54M	Potassium, total	mg/L	GMZ	29.00582															0.91
Lower	Compliance	R39S	Potassium, total	mg/L	GMZ	29.00582				3	7.3	10	23	73	63	19	16	14	12		
Lower	Downgradient	G03M	Sodium, total	mg/l	GMZ	164.7897	16	17	16	14	16	15	15	15	15	15	15	15	15	16	15
Lower	Downgradient	G16M	Sodium, total	mg/l	GMZ	164.7897	12	12	5.3	11	12	12	12	7.4	7.5	7.7	8.2	18	13	9.7	9.4
Lower	Downgradient	G18D	Sodium, total	mg/l	GMZ	164.7897	29	23	24	22	22	16	24	15	11	11	9.6	12			
Lower	Downgradient	G33D	Sodium, total	mg/l	GMZ	164.7897	5.7	5.7	6.7	7.4	11	9.9	9	Q 6.8	7.3		6.4	6	7	11	8.6
Lower	Downgradient	G34D	Sodium, total	mg/l	GMZ	164.7897	49	38	24	23	23	21	19	16	14	12	11	12	12	11	13
Lower	Downgradient	G35D	Sodium, total	mg/l	GMZ	164.7897	15	15	23	18	16	19	16	14	12	12	12	13	13	11	11
Lower	Downgradient	G36S	Sodium, total	mg/l	GMZ	164.7897	12	14	13	14	16	15	16	18	18	17	17	18	17	18	16
Lower	Downgradient	G37D	Sodium, total	mg/l	GMZ	164.7897	18	20	21	16		11	10	10	10	10	7.6	6.4			
Lower	Downgradient	G38S	Sodium, total	mg/l	GMZ	164.7897	39	54	43	35	31	30	28	64	28	18	15	56	50	19	15
Lower	Compliance	G39S	Sodium, total	mg/l	GMZ	164.7897	57	85	75												
Lower	Downgradient	G41M	Sodium, total	mg/l	GMZ	164.7897	14	24	16	14	15	15	14	24	19	26	22	17	18	16	17
Lower	Compliance	G52M	Sodium, total	mg/L	GMZ	164.7897						25	20	14	14	13	10	8	8.7	9.3	9.7
Lower	Compliance	G54M	Sodium, total	mg/L	GMZ	164.7897															4.9
Lower	Compliance	R39S	Sodium, total	mg/L	GMZ	164.7897				94	100	84	62	68	34	26	21	18	19		
Lower	Downgradient	G03M	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Downgradient	G16M	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Downgradient	G18D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		9.2		< 2.5		< 2.5		< 2.5		< 2			
Lower	Downgradient	G33D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5				< 2		< 2	
Lower	Downgradient	G34D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		19		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Downgradient	G35D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Downgradient	G36S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		6.7		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Downgradient	G37D	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2			
Lower	Downgradient	G38S	Tetrahydrofuran	ug/l	G2, GMZ	42		14		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Compliance	G39S	Tetrahydrofuran	ug/l	G2, GMZ	42		20													
Lower	Downgradient	G41M	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Compliance	G52M	Tetrahydrofuran	ug/L	G2, GMZ	42						< 2.5		< 2.5		< 2.5		< 2		< 2	
Lower	Compliance	G54M	Tetrahydrofuran	ug/L	G2, GMZ	42															
Lower	Compliance	R39S	Tetrahydrofuran	ug/L	G2, GMZ	42				19		20		13		< 2.5		< 2			

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G119	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G130	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G15S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G17S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G18S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G33S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Upper	Downgradient	G34S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G35S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G37S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Upper	Downgradient	G40S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1							
Upper	Downgradient	G41S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G50S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1		< 1									
Upper	Downgradient	G51S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5				< 1		< 1		< 1		< 1		< 1			
Upper	Compliance	G52S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Upper	Compliance	G54S	1,2,3-Trichlorobenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	R42S	1,2,3-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G119	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G130	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G15S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G17S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G18S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G33S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Upper	Downgradient	G34S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G35S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G37S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Upper	Downgradient	G40S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1							
Upper	Downgradient	G41S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G50S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1		< 1									
Upper	Downgradient	G51S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5				< 1		< 1		< 1		< 1		< 1			
Upper	Compliance	G52S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Upper	Compliance	G54S	1,2,4-Trichlorobenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	R42S	1,2,4-Trichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G119	1,4-Dichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G130	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G15S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G17S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G18S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G33S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Upper	Downgradient	G34S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G35S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G37S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Upper	Downgradient	G40S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		3.5		4		2.6		< 1							
Upper	Downgradient	G41S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G50S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				< 1		< 1									
Upper	Downgradient	G51S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5				3.1		< 1		2.4		6.2		6.6			
Upper	Compliance	G52S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Upper	Compliance	G54S	1,4-Dichlorobenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	R42S	1,4-Dichlorobenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G119	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9															
Upper	Downgradient	G130	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G15S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9															
Upper	Downgradient	G17S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09								
Upper	Downgradient	G18S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.19	< 0.09								
Upper	Downgradient	G33S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09		< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G34S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	9.2	11	10	10	6.6	4.8	5.6	3.5	1.4	0.81	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G35S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	3.8	4.2	3.4	1.2	2	1.9	1.6	1.1	1	0.86	0.64	0.36	0.22	0.33	< 0.1
Upper	Downgradient	G37S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	< 0.09	< 0.09	< 0.09	< 0.09		< 0.09	< 0.09	< 0.09	0.34	0.34	0.38	< 0.1			
Upper	Downgradient	G40S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	23	24	19	14	24	11	9.4	9							
Upper	Downgradient	G41S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.3	18	4.9	2.5	1.2	1.6	1	0.64	0.37	0.32	2.4	1.4	0.23	< 0.1	0.37
Upper	Downgradient	G50S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9			0.18	< 0.09	0.28	< 0.09	< 0.09								
Upper	Downgradient	G51S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9			8	9.2	9.8	5.7	12	16	45	76	100	39	160		
Upper	Compliance	G52S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9						< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Compliance	G54S	Ammonia as N, dissolved	mg/L	G1, GMZ	0.9															< 0.1
Upper	Downgradient	R03S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	1.3	0.9	1.2	R 1.2	1.1	0.9	1.2	1.3	0.93	0.84	0.66	0.45	0.4	0.22	< 0.1
Upper	Downgradient	R42S	Ammonia as N, dissolved	mg/l	G1, GMZ	0.9	2.2	1.4	1.7	2	2	1.7	1.7	1.6	1.4	0.53	0.57	2.3	1.2	2.1	0.44

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G119	Ammonia as N, total	mg/l	GMZ	900															
Upper	Downgradient	G130	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G15S	Ammonia as N, total	mg/l	GMZ	900															
Upper	Downgradient	G17S	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09								
Upper	Downgradient	G18S	Ammonia as N, total	mg/l	GMZ	900	< 0.09	Q 0.11	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09								
Upper	Downgradient	G33S	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09		< 0.09	< 0.1	< 0.1	< 0.1	< 0.1
Upper	Downgradient	G34S	Ammonia as N, total	mg/l	GMZ	900	9.1	11	10	10	6.6	4.7	5.4	3.5	1.3	0.76	< 0.09	< 0.1	< 0.1	< 0.1	25
Upper	Downgradient	G35S	Ammonia as N, total	mg/l	GMZ	900	3.8	4	3.4	1.2	2	1.9	1.6	1.1	1	0.86	0.62	0.39	0.23	0.3	< 0.1
Upper	Downgradient	G37S	Ammonia as N, total	mg/l	GMZ	900	< 0.09	< 0.09	< 0.09	< 0.09		< 0.09	< 0.09	< 0.09	0.68	0.34	0.38	< 0.1			
Upper	Downgradient	G40S	Ammonia as N, total	mg/l	GMZ	900	22	23	18	14	24	12	7.1	9.6							
Upper	Downgradient	G41S	Ammonia as N, total	mg/l	GMZ	900	1.2	19	4.7	2.5	1.2	1.6	1	0.66	0.28	0.32	2.3	1.4	0.19	< 0.1	0.37
Upper	Downgradient	G50S	Ammonia as N, total	mg/l	GMZ	900			< 0.09	< 0.09	0.11	0.47	< 0.09								
Upper	Downgradient	G51S	Ammonia as N, total	mg/l	GMZ	900			5.9	9.6	8.8	7.8	5	16	4.6	77	100	290	180		
Upper	Compliance	G52S	Ammonia as N, total	mg/L	GMZ	900						< 0.09	< 0.09	<,Q 0.09	< 0.09	< 0.09	< 0.09	< 0.1	< 0.1	< 0.1	Q3 0.17
Upper	Compliance	G54S	Ammonia as N, total	mg/L	GMZ	900															< 0.1
Upper	Downgradient	R03S	Ammonia as N, total	mg/l	GMZ	900	1.3	0.97	1.2	1	1.2	0.93	1.1	1.2	0.93	0.86	0.61	0.5	0.34	0.21	0.16
Upper	Downgradient	R42S	Ammonia as N, total	mg/l	GMZ	900	2.2	1.5	1.8	1.9	1.9	1.8	1.8	1.6	1.7	0.54	1	2.3	1.7	2.2	0.51
Upper	Downgradient	G119	Arsenic, Dissolved	ug/l	G1, GMZ	2															
Upper	Downgradient	G130	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G15S	Arsenic, Dissolved	ug/l	G1, GMZ	2															
Upper	Downgradient	G17S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1								
Upper	Downgradient	G18S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1								
Upper	Downgradient	G33S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G34S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G35S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G37S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1			
Upper	Downgradient	G40S	Arsenic, Dissolved	ug/l	G1, GMZ	2	1.1	1.7	1.6	2.3	2.9	1.7	1.4	1.5							
Upper	Downgradient	G41S	Arsenic, Dissolved	ug/l	G1, GMZ	2	31	26	25	25	23	19	17	16	13	16	13	8.4	6.4	< 1	< 1
Upper	Downgradient	G50S	Arsenic, Dissolved	ug/l	G1, GMZ	2			1.2	1	1.2	< 1	1.1								
Upper	Downgradient	G51S	Arsenic, Dissolved	ug/l	G1, GMZ	2			< 1	2.1	1.8	1.8	3.5	3.2	6.4	6.8	8.6	12	12		
Upper	Compliance	G52S	Arsenic, Dissolved	ug/L	G1, GMZ	2						1.1	< 1	3.4	1.2	1.1	< 1	< 1	2	3	< 1
Upper	Compliance	G54S	Arsenic, Dissolved	ug/L	G1, GMZ	2															< 1
Upper	Downgradient	R03S	Arsenic, Dissolved	ug/l	G1, GMZ	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	R42S	Arsenic, Dissolved	ug/l	G1, GMZ	2	57	38	27	52	52	40	28	36	31	12	7.5	40	30	42	8.2
Upper	Downgradient	G119	Arsenic, total	ug/l	GMZ	10															
Upper	Downgradient	G130	Arsenic, total	ug/l	GMZ	10	< 1	< 1	1.2	< 1	< 1	< 1	1.4	< 1	< 1	< 1	3.2	< 1	< 1	< 1	< 1
Upper	Downgradient	G15S	Arsenic, total	ug/l	GMZ	10															
Upper	Downgradient	G17S	Arsenic, total	ug/l	GMZ	10	1	1.4	1.2	1.2	1.2	1.7	2.4								
Upper	Downgradient	G18S	Arsenic, total	ug/l	GMZ	10	31	69	140	34	52	110	8.9								
Upper	Downgradient	G33S	Arsenic, total	ug/l	GMZ	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		8.2	< 1	< 1	< 1	2
Upper	Downgradient	G34S	Arsenic, total	ug/l	GMZ	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	7.6	< 1	< 1	< 1	2
Upper	Downgradient	G35S	Arsenic, total	ug/l	GMZ	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Upper	Downgradient	G37S	Arsenic, total	ug/l	GMZ	10	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1			
Upper	Downgradient	G40S	Arsenic, total	ug/l	GMZ	10	1.3	1.2	1.7	2.6	5	2.3	2.2	2							
Upper	Downgradient	G41S	Arsenic, total	ug/l	GMZ	10	120	28	29	60	56	78	31	20	40	66	20	9.6	8.2	3.4	12
Upper	Downgradient	G50S	Arsenic, total	ug/l	GMZ	10			720	96	180	76	210								
Upper	Downgradient	G51S	Arsenic, total	ug/l	GMZ	10			36	3.5	68	30	64	28	120	56	46	21	65		
Upper	Compliance	G52S	Arsenic, total	ug/L	GMZ	10						1.9	29	74	40	36	45	29	29	2	32
Upper	Compliance	G54S	Arsenic, total	ug/L	GMZ	10															18
Upper	Downgradient	R03S	Arsenic, total	ug/l	GMZ	10	3.3	1.8	4.6	< 1	< 1	< 1	2.3	18	3.4	< 1	5.6	< 1	2	1	6.5
Upper	Downgradient	R42S	Arsenic, total	ug/l	GMZ	10	58	40	31	51	50	48	36	40	42	14	6.7	36	31	38	13
Upper	Downgradient	G119	Barium, total	ug/l	GMZ	225180.6															
Upper	Downgradient	G130	Barium, total	ug/l	GMZ	225180.6	170	180	200	160	160	160	210	170	170	170	180	150	150	160	150
Upper	Downgradient	G15S	Barium, total	ug/l	GMZ	225180.6															
Upper	Downgradient	G17S	Barium, total	ug/l	GMZ	225180.6	60	76	63	59	69	89	75								
Upper	Downgradient	G18S	Barium, total	ug/l	GMZ	225180.6	500	1200	2100	720	1100	2800	1100								
Upper	Downgradient	G33S	Barium, total	ug/l	GMZ	225180.6	73	73	81	66	68	80	85	78	71		330	85	91	72	140
Upper	Downgradient	G34S	Barium, total	ug/l	GMZ	225180.6	160	180	160	150	140	150	140	120	100	110	200	85	82	73	130
Upper	Downgradient	G35S	Barium, total	ug/l	GMZ	225180.6	180	210	180	120	130	190	160	150	140	170	170	110	110	100	110
Upper	Downgradient	G37S	Barium, total	ug/l	GMZ	225180.6	43	50	49	46		64	87	50	78	96	63	51			
Upper	Downgradient	G40S	Barium, total	ug/l	GMZ	225180.6	530	550	550	500	630	480	450	400							
Upper	Downgradient	G41S	Barium, total	ug/l	GMZ	225180.6	180	220	140	130	140	120	110	90	83	85	110	77	85	100	130
Upper	Downgradient	G50S	Barium, total	ug/l	GMZ	225180.6			2900	510	790	700	1200								
Upper	Downgradient	G51S	Barium, total	ug/l	GMZ	225180.6			330	240	560	540	640	600	1400	930	1100	1000	1300		
Upper	Compliance	G52S	Barium, total	ug/L	GMZ	225180.6						74	520	800	710	560	860	540	340	68	380
Upper	Compliance	G54S	Barium, total	ug/L	GMZ	225180.6															720
Upper	Downgradient	R03S	Barium, total	ug/l	GMZ	225180.6	170	160	180	160	180	170	170	200	170	160	160	150	160	170	180
Upper	Downgradient	R42S	Barium, total	ug/l	GMZ	225180.6	470	400	340	330	320	420	380	330	530	540	450	940	740	840	470

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G119	Boron, Dissolved	ug/l	G1, GMZ	98															
Upper	Downgradient	G130	Boron, Dissolved	ug/l	G1, GMZ	98	19	21	15	15	16	11	14	11	21	14	12	11	18	11	< 10
Upper	Downgradient	G15S	Boron, Dissolved	ug/l	G1, GMZ	98															
Upper	Downgradient	G17S	Boron, Dissolved	ug/l	G1, GMZ	98	22	43	35	15	22	33	32								
Upper	Downgradient	G18S	Boron, Dissolved	ug/l	G1, GMZ	98	94	100	68	58	92	110	59								
Upper	Downgradient	G33S	Boron, Dissolved	ug/l	G1, GMZ	98	11	15	13	< 10	< 10	< 10	< 10	< 10	15		11	16	29	15	15
Upper	Downgradient	G34S	Boron, Dissolved	ug/l	G1, GMZ	98	72	78	60	63	44	46	44	22	37	32	11	19	38	18	15
Upper	Downgradient	G35S	Boron, Dissolved	ug/l	G1, GMZ	98	39	56	31	20	18	40	30	13	24	36	20	12	41	13	14
Upper	Downgradient	G37S	Boron, Dissolved	ug/l	G1, GMZ	98	35	36	20	27		40	28	25	72	40	31	27			
Upper	Downgradient	G40S	Boron, Dissolved	ug/l	G1, GMZ	98	140	180	140	150	340	150	180	220							
Upper	Downgradient	G41S	Boron, Dissolved	ug/l	G1, GMZ	98	65	130	60	78	100	42	40	30	34	40	69	25	39	20	43
Upper	Downgradient	G50S	Boron, Dissolved	ug/l	G1, GMZ	98			140	42	45	53	48								
Upper	Downgradient	G51S	Boron, Dissolved	ug/l	G1, GMZ	98			96	74	75	77	91	110	220	310	410	480	520		
Upper	Compliance	G52S	Boron, Dissolved	ug/L	G1, GMZ	98						41	62	65	68	59	70	65	28	68	70
Upper	Compliance	G54S	Boron, Dissolved	ug/L	G1, GMZ	98															< 10
Upper	Downgradient	R03S	Boron, Dissolved	ug/l	G1, GMZ	98	38	40	45	43	36	37	37	25	41	33	29	32	37	28	26
Upper	Downgradient	R42S	Boron, Dissolved	ug/l	G1, GMZ	98	84	88	77	80	83	78	79	68	94	52	62	80	72	99	56
Upper	Downgradient	G119	Boron, total	ug/l	GMZ	200															
Upper	Downgradient	G130	Boron, total	ug/l	GMZ	200	22	17	15	12	< 10	17	19	12	< 10	20	18	15	< 10	15	11
Upper	Downgradient	G15S	Boron, total	ug/l	GMZ	200															
Upper	Downgradient	G17S	Boron, total	ug/l	GMZ	200	33	41	26	14	20	42	44								
Upper	Downgradient	G18S	Boron, total	ug/l	GMZ	200	200	360	580	130	220	490	86								
Upper	Downgradient	G33S	Boron, total	ug/l	GMZ	200	14	< 10	10	12	< 10	< 10	14	18	15		30	18	47	20	20
Upper	Downgradient	G34S	Boron, total	ug/l	GMZ	200	78	71	65	62	40	43	41	36	43	30	14	20	38	27	16
Upper	Downgradient	G35S	Boron, total	ug/l	GMZ	200	42	50	41	21	13	36	31	28	28	27	16	15	29	15	11
Upper	Downgradient	G37S	Boron, total	ug/l	GMZ	200	53	28	18	28		37	29	31	61	34	35	30			
Upper	Downgradient	G40S	Boron, total	ug/l	GMZ	200	150	160	160	140	360	150	180	220							
Upper	Downgradient	G41S	Boron, total	ug/l	GMZ	200	70	130	57	66	96	39	40	36	31	38	66	29	27	28	38
Upper	Downgradient	G50S	Boron, total	ug/l	GMZ	200			610	100	180	130	320								
Upper	Downgradient	G51S	Boron, total	ug/l	GMZ	200			130	67	120	110	160	150	260	330	450	440	500		
Upper	Compliance	G52S	Boron, total	ug/L	GMZ	200						34	200	250	260	220	290	210	150	71	160
Upper	Compliance	G54S	Boron, total	ug/L	GMZ	200															72
Upper	Downgradient	R03S	Boron, total	ug/l	GMZ	200	41	30	46	31	34	31	35	32	25	30	39	31	25	32	29
Upper	Downgradient	R42S	Boron, total	ug/l	GMZ	200	86	65	85	66	79	100	98	85	98	47	53	85	67	100	60
Upper	Downgradient	G119	Chloride, Dissolved	mg/l	G1, GMZ	87.511															
Upper	Downgradient	G130	Chloride, Dissolved	mg/l	G1, GMZ	87.511	34	39	45	47	48	43	46	49	37	40	30	30	37	36	25
Upper	Downgradient	G15S	Chloride, Dissolved	mg/l	G1, GMZ	87.511															
Upper	Downgradient	G17S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	22	48	8.4	11	14	7.4	6.3								
Upper	Downgradient	G18S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	7.6	16	48	70	26	35	110								
Upper	Downgradient	G33S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	14	16	28	27	21	25	31	27	26		36	32	23	28	27
Upper	Downgradient	G34S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	42	53	35	36	34	40	35	29	41	29	33	35	28	23	27
Upper	Downgradient	G35S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	37	34	32	26	26	44	34	27	21	19	35	34	21	21	27
Upper	Downgradient	G37S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	46	55	49	54		57	50	47	36	32	36	33			
Upper	Downgradient	G40S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	270	89	290	260	290	210	200	190							
Upper	Downgradient	G41S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	50	78	100	74	70	42	42	52	55	44	59	39	37	28	50
Upper	Downgradient	G50S	Chloride, Dissolved	mg/l	G1, GMZ	87.511			120	35	36	42	35								
Upper	Downgradient	G51S	Chloride, Dissolved	mg/l	G1, GMZ	87.511			86	140	190	280	270	480	820	740	790	1000	4.4		
Upper	Compliance	G52S	Chloride, Dissolved	mg/L	G1, GMZ	87.511						65	75	52	53	45	41	42	38		34
Upper	Compliance	G54S	Chloride, Dissolved	mg/L	G1, GMZ	87.511															19
Upper	Downgradient	R03S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	45	52	53	49	48	41	45	40	45	42	40	43	43		42
Upper	Downgradient	R42S	Chloride, Dissolved	mg/l	G1, GMZ	87.511	100	83	110	82	50	63	33	26	96	63	63	140	100	110	67
Upper	Downgradient	G119	Chloride, total	mg/l	GMZ	87.51186															
Upper	Downgradient	G130	Chloride, total	mg/l	GMZ	87.51186	33	40	45	48	48	45	52	49	38	43	30	30	41	2.9	24
Upper	Downgradient	G15S	Chloride, total	mg/l	GMZ	87.51186															
Upper	Downgradient	G17S	Chloride, total	mg/l	GMZ	87.51186	21	44	7.5	9.6	14	7.7	5.9								
Upper	Downgradient	G18S	Chloride, total	mg/l	GMZ	87.51186	11	23	48	70	26	33	110								
Upper	Downgradient	G33S	Chloride, total	mg/l	GMZ	87.51186	16	16	27	28	22	27	32	30	26		37	31	21	29	27
Upper	Downgradient	G34S	Chloride, total	mg/l	GMZ	87.51186	42	54	34	38	35	40	35	31	38	30	33	35	29	34	27
Upper	Downgradient	G35S	Chloride, total	mg/l	GMZ	87.51186	39	35	34	26	27	44	35	28	21	18	35	34	21	21	24
Upper	Downgradient	G37S	Chloride, total	mg/l	GMZ	87.51186	46	55	49	56		60	51	47	36	32	35	33			
Upper	Downgradient	G40S	Chloride, total	mg/l	GMZ	87.51186	220	250	270	260	300	210	180	180							
Upper	Downgradient	G41S	Chloride, total	mg/l	GMZ	87.51186	50	78	91	72	68	45	45	54	53	43	59	39	39	31	32
Upper	Downgradient	G50S	Chloride, total	mg/l	GMZ	87.51186			140	38	32	33	36								
Upper	Downgradient	G51S	Chloride, total	mg/l	GMZ	87.51186			76	140	200	280	260	470	830	610	900	1000	1200		
Upper	Compliance	G52S	Chloride, total	mg/L	GMZ	87.51186						68	72	55	47	48	45	43	42	36	35
Upper	Compliance	G54S	Chloride, total	mg/L	GMZ	87.51186															17
Upper	Downgradient	R03S	Chloride, total	mg/l	GMZ	87.51186	48	51	60	50	56	44	41	39	45	39	39	40	44	42	38
Upper	Downgradient	R42S	Chloride, total	mg/l	GMZ	87.51186	100	98	110	79	47	63	28	28	120	70	70	140	160	140	92

Note: A highlighted cell indicates an exceedence of the AGQS value.

Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G119	Ethylbenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G130	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G15S	Ethylbenzene	ug/l	G2, GMZ	5															
Upper	Downgradient	G17S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G18S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1									
Upper	Downgradient	G33S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1				< 1		< 1	
Upper	Downgradient	G34S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G35S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G37S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1			
Upper	Downgradient	G40S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1							
Upper	Downgradient	G41S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G50S	Ethylbenzene	ug/l	G2, GMZ	5				< 1		< 1									
Upper	Downgradient	G51S	Ethylbenzene	ug/l	G2, GMZ	5				< 1		< 1		< 1		< 1		< 1			
Upper	Compliance	G52S	Ethylbenzene	ug/L	G2, GMZ	5						< 1		< 1		< 1		< 1		< 1	
Upper	Compliance	G54S	Ethylbenzene	ug/L	G2, GMZ	5															
Upper	Downgradient	R03S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	R42S	Ethylbenzene	ug/l	G2, GMZ	5		< 1		< 1		< 1		< 1		< 1		< 1		< 1	
Upper	Downgradient	G119	Fluoride, total	mg/l	GMZ	273.35															
Upper	Downgradient	G130	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.41	< 0.25	0.4	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Upper	Downgradient	G15S	Fluoride, total	mg/l	GMZ	273.35															
Upper	Downgradient	G17S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.3	< 0.25	< 0.25								
Upper	Downgradient	G18S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	0.26	< 0.25	0.38	< 0.25	< 0.25								
Upper	Downgradient	G33S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	0.4	< 0.25	< 0.25	0.42	0.26		< 0.25	< 0.25	0.26	0.4	0.311
Upper	Downgradient	G34S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.44	< 0.25	0.25	0.25	< 0.25	< 0.25	0.28	< 0.25	0.311
Upper	Downgradient	G35S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.31	0.27	0.351
Upper	Downgradient	G37S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	0.3	< 0.25		< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25			
Upper	Downgradient	G40S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25							
Upper	Downgradient	G41S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.264
Upper	Downgradient	G50S	Fluoride, total	mg/l	GMZ	273.35			< 0.25	< 0.25	< 0.25	< 0.25	< 0.25								
Upper	Downgradient	G51S	Fluoride, total	mg/l	GMZ	273.35			< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25		
Upper	Compliance	G52S	Fluoride, total	mg/L	GMZ	273.35						< 0.25	< 0.25	0.45	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.32	< 2.5
Upper	Compliance	G54S	Fluoride, total	mg/L	GMZ	273.35															0.291
Upper	Downgradient	R03S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.25	< 0.25	< 2.5	< 0.25
Upper	Downgradient	R42S	Fluoride, total	mg/l	GMZ	273.35	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.39	0.49	< 0.25	< 0.25	0.25	< 0.25	< 0.25	0.27	< 0.25
Upper	Downgradient	G119	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74															
Upper	Downgradient	G130	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	11	12	13	12	H 13	12	12	12	12	12	12	12	12	13	11
Upper	Downgradient	G15S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74															
Upper	Downgradient	G17S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	2.9	1.9	0.83	2.2	1.5	1.4	2.1								
Upper	Downgradient	G18S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	1.8	0.45	3	3	1.7	1.6	H 2.5								
Upper	Downgradient	G33S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	7.4	7.5	9.6	9	H 9.3	10	10	9.4	10		5.7	5.6	6.1	5.6	7.5
Upper	Downgradient	G34S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	4.3	5.7	3.6	3.8	H 4.3	3.2	2.6	5.5	6.3	5.6	7.1	5.4	5.8	5.4	6.6
Upper	Downgradient	G35S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	2.3	1.2	3.7	3.3	H 3.3	H 0.8	2.3	2	0.4	2.2	3.4	8.5	0.07	5	7.4
Upper	Downgradient	G37S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	5	5.3	5.3	4.6		6.5	4.6	7.6	3.1	0.84	1.6	2.7			
Upper	Downgradient	G40S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	H 1.7	0.63	0.047	< 0.02	< 0.02	< 0.02	< 0.02	H 2							
Upper	Downgradient	G41S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	< 0.02	0.032	< 0.02	0.083	0.069	0.044	0.048	0.036	< 0.02	0.029	< 0.02	< 0.02	2.5	4.6
Upper	Downgradient	G50S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74			0.12	3.2	3.1	0.52	0.88								
Upper	Downgradient	G51S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74			0.25	0.085	0.42	2.7	< 0.2	0.57	0.054	H 0.19	0.098	0.2	H 0.09		
Upper	Compliance	G52S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74						2.3	6.5	2.8	4	5.2	6.1	5.6	5.9		4.4
Upper	Compliance	G54S	Nitrate as N, dissolved	mg/L	G1, GMZ	11.74															4.2
Upper	Downgradient	R03S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	H 3.1	3.2	2.2	3.9	3.3	3.9	H 11	H 3.7	H 3	H 2.4	H 3.4	3.6	H 3.5		3.5
Upper	Downgradient	R42S	Nitrate as N, dissolved	mg/l	G1, GMZ	11.74	< 0.02	H 0.45	0.034	< 0.02	0.093	0.12	0.071	0.065	0.065	0.55	0.31	< 0.02	< 0.02	< 0.02	0.2
Upper	Downgradient	G119	Nitrate as N, total	mg/l	GMZ	11.7389															
Upper	Downgradient	G130	Nitrate as N, total	mg/l	GMZ	11.7389	12	13	13	13	H 13	12	13	12	12	12	12	12	12	11	11
Upper	Downgradient	G15S	Nitrate as N, total	mg/l	GMZ	11.7389															
Upper	Downgradient	G17S	Nitrate as N, total	mg/l	GMZ	11.7389	2.8	2	0.77	2.3	1.5	1.4	2								
Upper	Downgradient	G18S	Nitrate as N, total	mg/l	GMZ	11.7389	2.1	0.19	2.6	2.2	1.4	1.8	H 2.6								
Upper	Downgradient	G33S	Nitrate as N, total	mg/l	GMZ	11.7389	8.6	7.9	10	9.9	H 11	11	12	11	10		5.9	5.4	4.6	5.3	7.6
Upper	Downgradient	G34S	Nitrate as N, total	mg/l	GMZ	11.7389	4.4	6.1	3.6	6.4	H 4.4	3.2	3.6	5.8	6.2	5.6	7.2	5.4	6.4	5.6	6.6
Upper	Downgradient	G35S	Nitrate as N, total	mg/l	GMZ	11.7389	2.2	1.2	4	3.4	H 3.4	H 0.66	2.3	2	0.32	2.2	3.3	8.6	0.15	4.4	6.1
Upper	Downgradient	G37S	Nitrate as N, total	mg/l	GMZ	11.7389	5	5.2	5.2	4.7		6.8	4.8	7.8	3.7	0.85	1.6	2.8			
Upper	Downgradient	G40S	Nitrate as N, total	mg/l	GMZ	11.7389	H 2.4	1.7	0.55	< 0.02	0.11	< 0.02	3.4	1.3							
Upper	Downgradient	G41S	Nitrate as N, total	mg/l	GMZ	11.7389	0.098	0.061	4.6	0.03	0.076	0.064	0.098	< 0.02	0.96	< 0.02	0.032	0.07	0.06	2.9	3.2
Upper	Downgradient	G50S	Nitrate as N, total	mg/l	GMZ	11.7389			< 0.02	3.6	3.2	0.92	1								
Upper	Downgradient	G51S	Nitrate as N, total	mg/l	GMZ	11.7389			0.31	0.074	0.17	0.4	< 0.2	0.74	< 0.02	H 0.55	0.089	0.08	H 0.17		
Upper	Compliance	G52S	Nitrate as N, total	mg/L	GMZ	11.7389						2.2	7	4.1	5.5	6.7	6.1	6.4	5.4	4.3	3.9
Upper	Compliance	G54S	Nitrate as N, total	mg/L	GMZ	11.7389															2.6
Upper	Downgradient	R03S	Nitrate as N, total	mg/l	GMZ	11.7389	H 2.9	3.3	2	4	3.9	4	H 5.4	H 3.7	H 3.3	H 2.9	H 3.5	4	H 3.9	4.3	5.6
Upper	Downgradient	R42S	Nitrate as N, total	mg/l	GMZ	11.7389	< 0.02	0.041	< 0.02	< 0.02	0.14	0.068	0.063	0.061	0.046	0.16	0.39	< 0.02	< 0.02	< 0.02	0.46

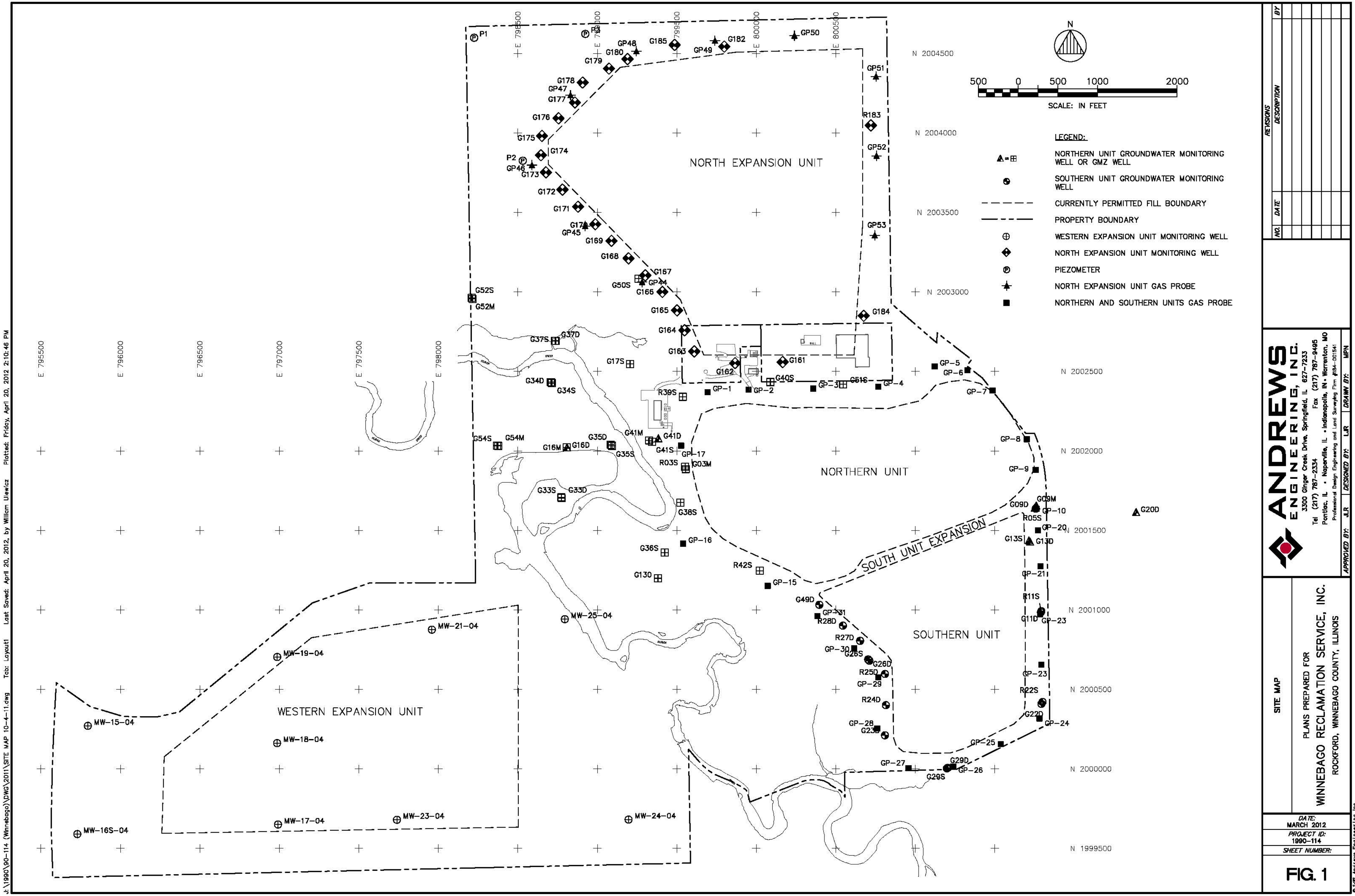
Note: A highlighted cell indicates an exceedence of the AGQS value.

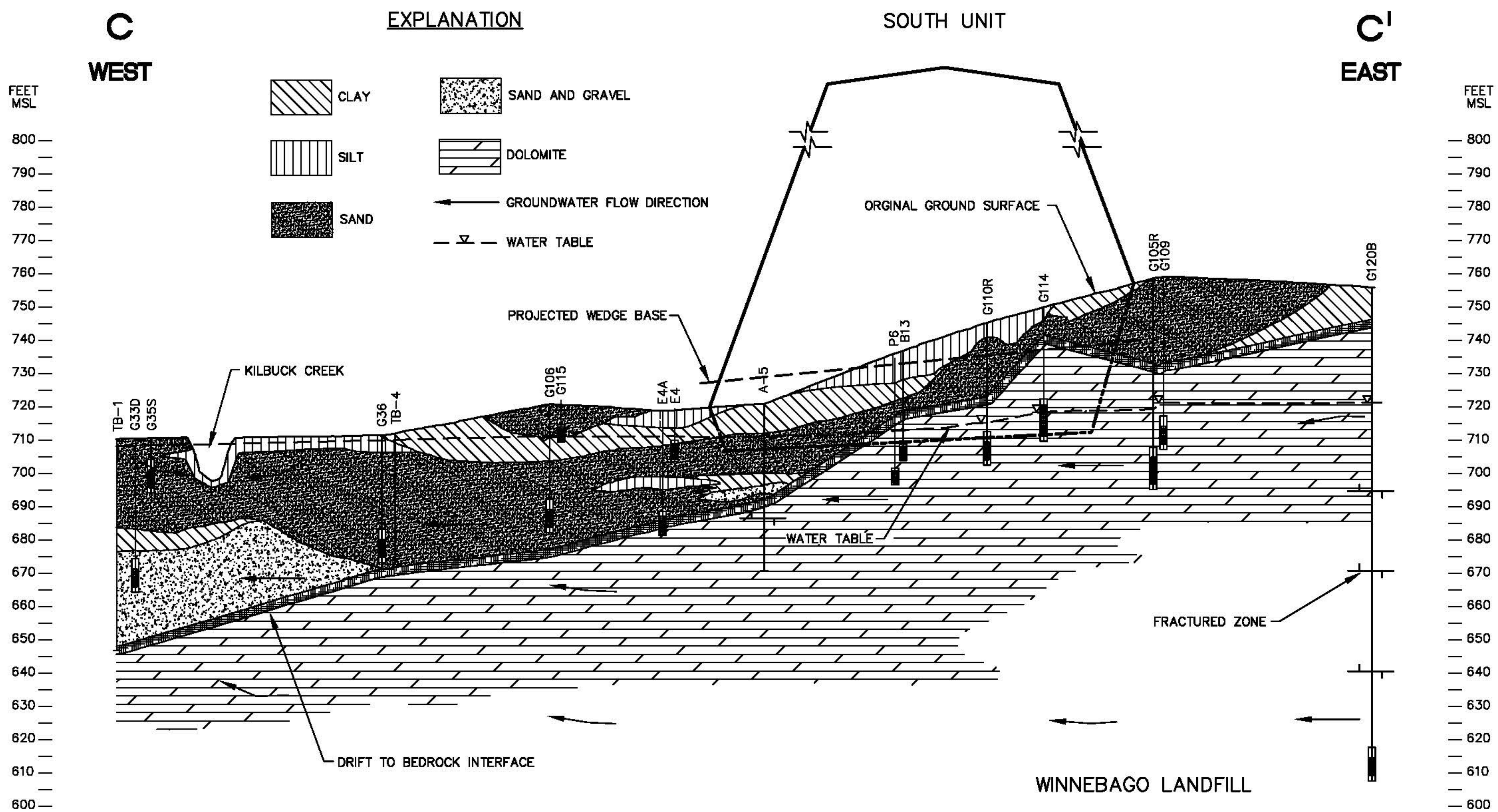
Table 4
Winnebago Landfill
Historical Northern Unit GMZ Analytical Data

Zone	Location	Well ID	Parameter	Units	GW List	AGQS	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12
Upper	Downgradient	G119	Potassium, total	mg/l	GMZ	29.00582															
Upper	Downgradient	G130	Potassium, total	mg/l	GMZ	29.00582	1.4	1.6	2.2	1.3	1.6	1.4	2.5	1.4	1.3	1.5	2.1	1	1.1	1.2	1.4
Upper	Downgradient	G15S	Potassium, total	mg/l	GMZ	29.00582															
Upper	Downgradient	G17S	Potassium, total	mg/l	GMZ	29.00582	2.1	3.6	3	2.4	3.3	4.3	3.4								
Upper	Downgradient	G18S	Potassium, total	mg/l	GMZ	29.00582	18	33	63	17	24	77	12								
Upper	Downgradient	G33S	Potassium, total	mg/l	GMZ	29.00582	1	1.5	1.9	1.2	1.4	1.3	2.1	1.6	1.4		6.8	1.8	1.9	1.4	4.1
Upper	Downgradient	G34S	Potassium, total	mg/l	GMZ	29.00582	8.3	9.4	9.6	9	8.1	8.2	7	5.9	4.4	3.8	4.4	1.7	2.4	2	2.8
Upper	Downgradient	G35S	Potassium, total	mg/l	GMZ	29.00582	7	7.6	6.5	4.2	4.8	5.6	4.4	3.6	3.7	3.9	3	2.2	1.8	2.2	1.9
Upper	Downgradient	G37S	Potassium, total	mg/l	GMZ	29.00582	3.2	2.9	2	1.8		3.2	2.6	3.1	6.3	4.9	3.7	2.7			
Upper	Downgradient	G40S	Potassium, total	mg/l	GMZ	29.00582	23	23	21	20	23	16	14	14							
Upper	Downgradient	G41S	Potassium, total	mg/l	GMZ	29.00582	9.3	15	7.5	5.8	5.7	6.2	5.2	4.4	4	4.9	7.9	5.1	4.6	3.4	4.5
Upper	Downgradient	G50S	Potassium, total	mg/l	GMZ	29.00582			75	13	22	19	50								
Upper	Downgradient	G51S	Potassium, total	mg/l	GMZ	29.00582			13	15	20	20	24	21	31	30	39	39	46		
Upper	Compliance	G52S	Potassium, total	mg/L	GMZ	29.00582						3.6	22	25	41	36	55	35	14	3.7	24
Upper	Compliance	G54S	Potassium, total	mg/L	GMZ	29.00582															14
Upper	Downgradient	R03S	Potassium, total	mg/l	GMZ	29.00582	4.8	4.3	4.9	4.5	4.5	4.2	4.1	4.5	3.8	3.7	3.8	3.7	3.8	3.4	3.7
Upper	Downgradient	R42S	Potassium, total	mg/l	GMZ	29.00582	1.7	1.4	1.5	1.6	1.4	1.4	1.5	1.3	1.5	0.78	0.71	1.4	1.1	1.4	1.3
Upper	Downgradient	G119	Sodium, total	mg/l	GMZ	164.7897															
Upper	Downgradient	G130	Sodium, total	mg/l	GMZ	164.7897	12	11	14	13	16	16	14	16	12	13	10	7.8	10	9.8	6.9
Upper	Downgradient	G15S	Sodium, total	mg/l	GMZ	164.7897															
Upper	Downgradient	G17S	Sodium, total	mg/l	GMZ	164.7897	8.2	20	15	8.9	16	21	12								
Upper	Downgradient	G18S	Sodium, total	mg/l	GMZ	164.7897	7.6	11	16	27	16	27	35								
Upper	Downgradient	G33S	Sodium, total	mg/l	GMZ	164.7897	5.8	5.2	7.5	8.2	7.4	8	7.6	7.9	10		12	13	11	12	11
Upper	Downgradient	G34S	Sodium, total	mg/l	GMZ	164.7897	18	19	17	15	14	15	16	14	16	13	12	15	17	11	11
Upper	Downgradient	G35S	Sodium, total	mg/l	GMZ	164.7897	14	15	12	9.3	10	17	14	12	11	11	11	14	10	10	11
Upper	Downgradient	G37S	Sodium, total	mg/l	GMZ	164.7897	16	20	20	18		23	19	19	18	15	14	13			
Upper	Downgradient	G40S	Sodium, total	mg/l	GMZ	164.7897	97	110	100	100	130	95	90	92							
Upper	Downgradient	G41S	Sodium, total	mg/l	GMZ	164.7897	20	32	27	27	30	18	16	18	12	13	23	15	15	13	18
Upper	Downgradient	G50S	Sodium, total	mg/l	GMZ	164.7897			50	10	10	11	16								
Upper	Downgradient	G51S	Sodium, total	mg/l	GMZ	164.7897			55	48	42	60	72	120	220	230	240	270	360		
Upper	Compliance	G52S	Sodium, total	mg/L	GMZ	164.7897						31	24	18	21	24	23	20	16	17	16
Upper	Compliance	G54S	Sodium, total	mg/L	GMZ	164.7897															7.2
Upper	Downgradient	R03S	Sodium, total	mg/l	GMZ	164.7897	17	18	19	17	18	19	17	17	19	17	17	16	17	17	18
Upper	Downgradient	R42S	Sodium, total	mg/l	GMZ	164.7897	54	54	52	49	52	52	43	39	42	43	46	44	44	47	32
Upper	Downgradient	G119	Tetrahydrofuran	ug/l	G2, GMZ	42															
Upper	Downgradient	G130	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Upper	Downgradient	G15S	Tetrahydrofuran	ug/l	G2, GMZ	42															
Upper	Downgradient	G17S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5									
Upper	Downgradient	G18S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5									
Upper	Downgradient	G33S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5				< 2		< 2	
Upper	Downgradient	G34S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Upper	Downgradient	G35S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		2.6		< 2.5		< 2.5		< 2.5		< 2		< 2	
Upper	Downgradient	G37S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2			
Upper	Downgradient	G40S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5							
Upper	Downgradient	G41S	Tetrahydrofuran	ug/l	G2, GMZ	42		36		3.2		< 2.5		< 2.5		< 2.5		< 2		< 2	
Upper	Downgradient	G50S	Tetrahydrofuran	ug/l	G2, GMZ	42				< 2.5		< 2.5									
Upper	Downgradient	G51S	Tetrahydrofuran	ug/l	G2, GMZ	42				4.3		18		44		61		94			
Upper	Compliance	G52S	Tetrahydrofuran	ug/L	G2, GMZ	42						< 2.5		< 2.5		< 2.5		< 2		< 2	
Upper	Compliance	G54S	Tetrahydrofuran	ug/L	G2, GMZ	42															
Upper	Downgradient	R03S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	
Upper	Downgradient	R42S	Tetrahydrofuran	ug/l	G2, GMZ	42		< 2.5		< 2.5		< 2.5		< 2.5		< 2.5		< 2		< 2	

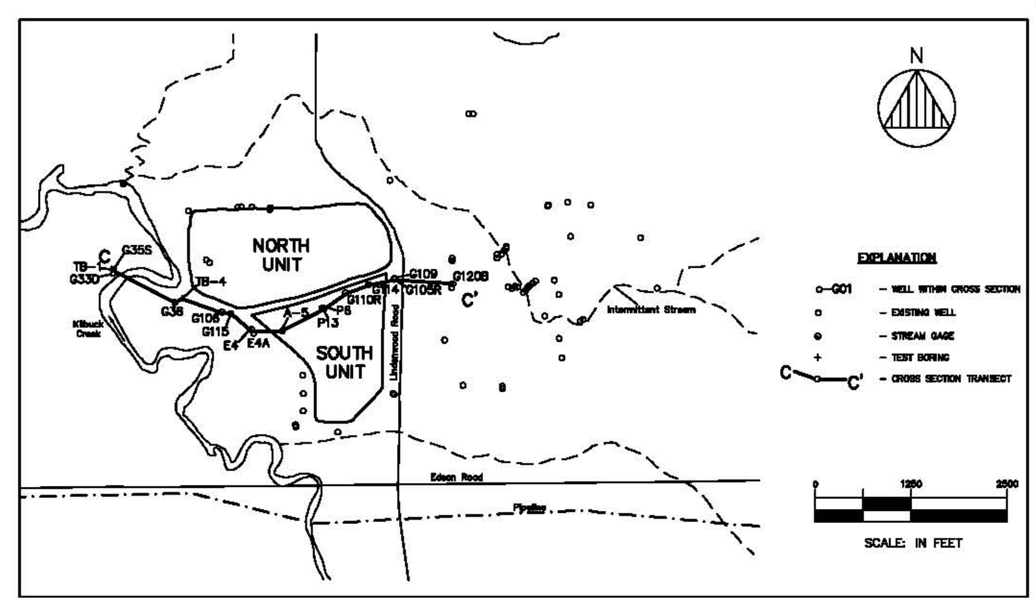
Note: A highlighted cell indicates an exceedence of the AGQS value.

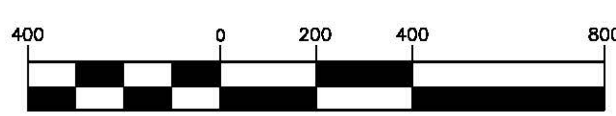
FIGURES


NORTH EXPANSION UNIT
NORTHERN UNIT
SOUTH UNIT EXPANSION
SOUTHERN UNIT
WESTERN EXPANSION UNIT
SCALE: IN FEET
LEGEND:
NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
SOUTHERN UNIT GROUNDWATER MONITORING WELL
CURRENTLY PERMITTED FILL BOUNDARY
PROPERTY BOUNDARY
WESTERN EXPANSION UNIT MONITORING WELL
NORTH EXPANSION UNIT MONITORING WELL
PIEZOMETER
NORTH EXPANSION UNIT GAS PROBE
NORTHERN AND SOUTHERN UNITS GAS PROBE
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 627-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
SITE MAP
PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS
DATE: MARCH 2012
PROJECT ID: 1990-114
SHEET NUMBER:
FIG. 1
J:\1990\90-114 (Winnebago)\DWG\2011\SITE MAP 10-4-11.dwg Tab: Layout1 Last Saved: April 20, 2012, by William Ulewicz Plotted: Friday, April 20, 2012 2:10:46 PM



WINNEBAGO LANDFILL





SCALE: IN FEET

GRAPHIC SCALE

10X VERTICAL EXAGGERATION

NOTE:

1. GROUNDWATER ELEVATIONS ARE BASED ON WATER LEVEL DATA COLLECTED ON 02/17/95.
2. THE DISTANCED BETWEEN BORING LOCATIONS WERE ESTIMATED BASED ON STRAIGHT-LINE TRANSECTS.

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APPROVED BY: SRH | DESIGNED BY: SRH | DRAWN BY: MPN

EAST-WEST PROFILE C-C'

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

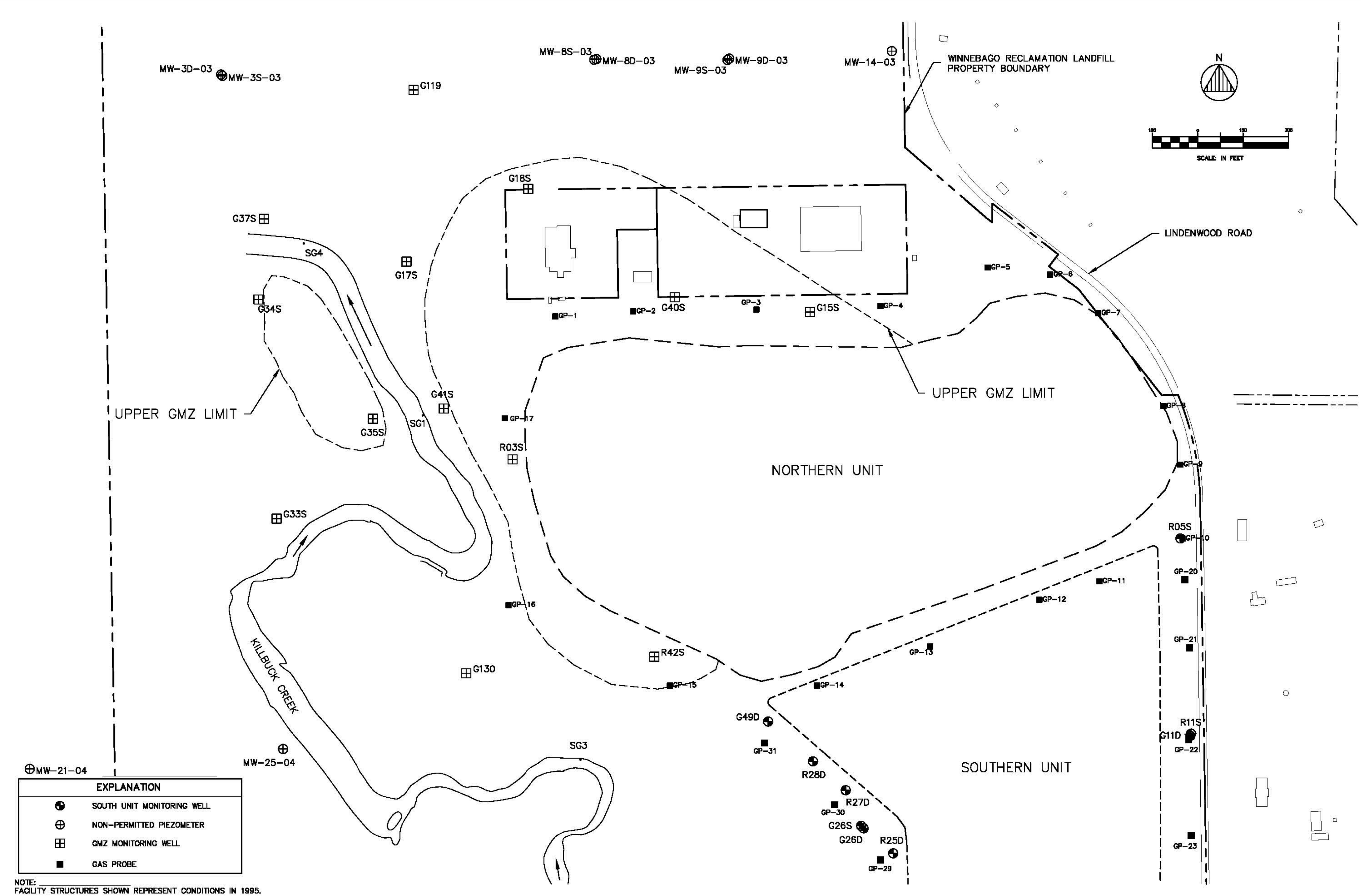
DATE: APRIL 2007

PROJECT ID: 90-114

SHEET NUMBER:

FIG. 2

File: J:\1990\90-114 (Winnebago)\DWG\XSEC IMAGE revised.dwg   Tab: C-C' (11x17)   User: wulewicz   Plotted: Apr 10, 2012 - 2:26 PM



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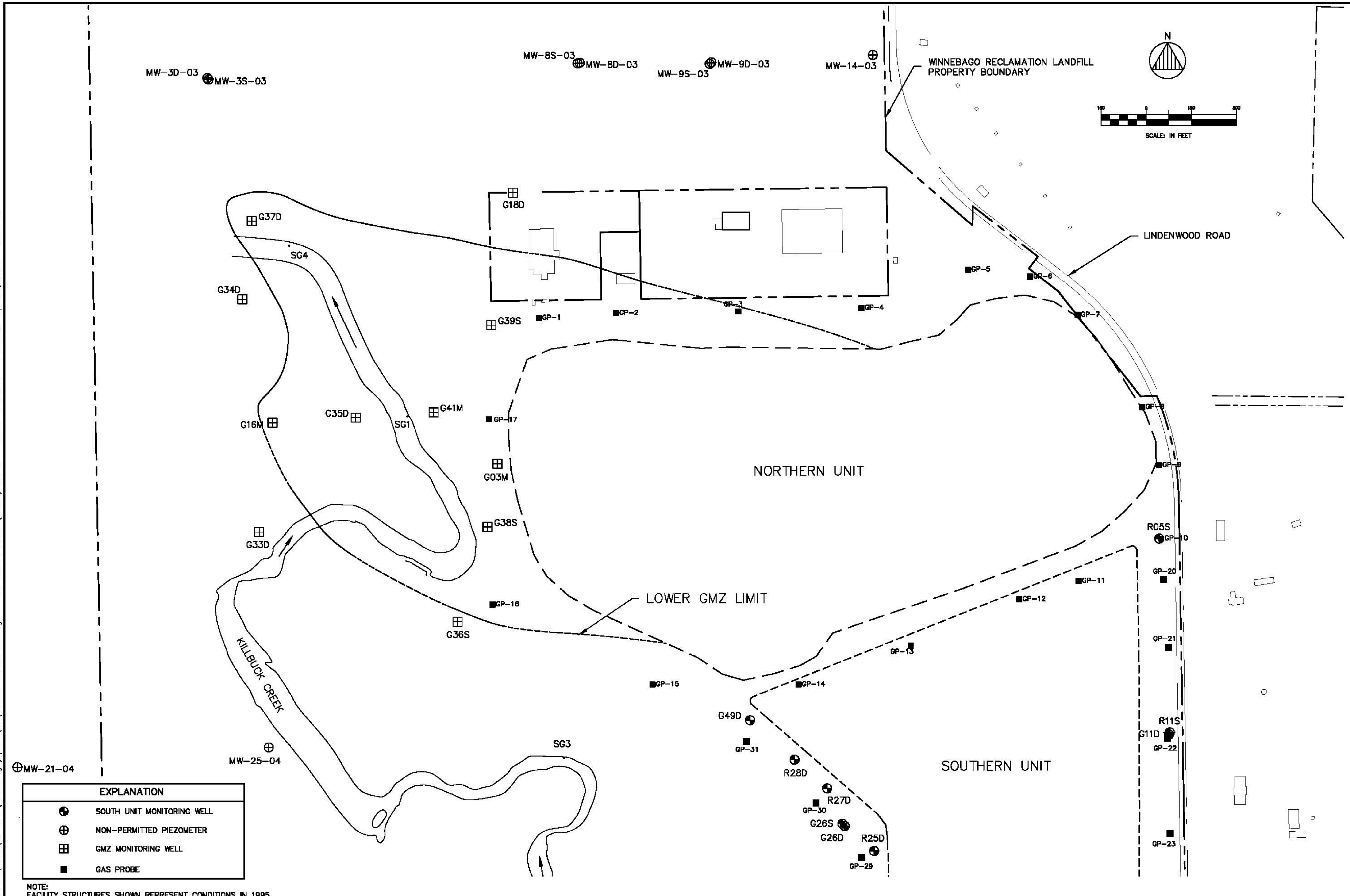
DRAWN BY: MPN
DESIGNED BY: SRH
APPROVED BY: SRH

1995 UPPER ZONE GMZ EXTENT

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2007
PROJECT ID: 90-114
SHEET NUMBER:

FIG. 3



File: J:\1990\90-114 (Winnebago)\DWG\K1\1995 GMZ EXTENT.dwg Tab: LOWER ZONE (11X17) FIG 5 User: wulewicz Plotted: Apr 20, 2012 - 2:12 PM

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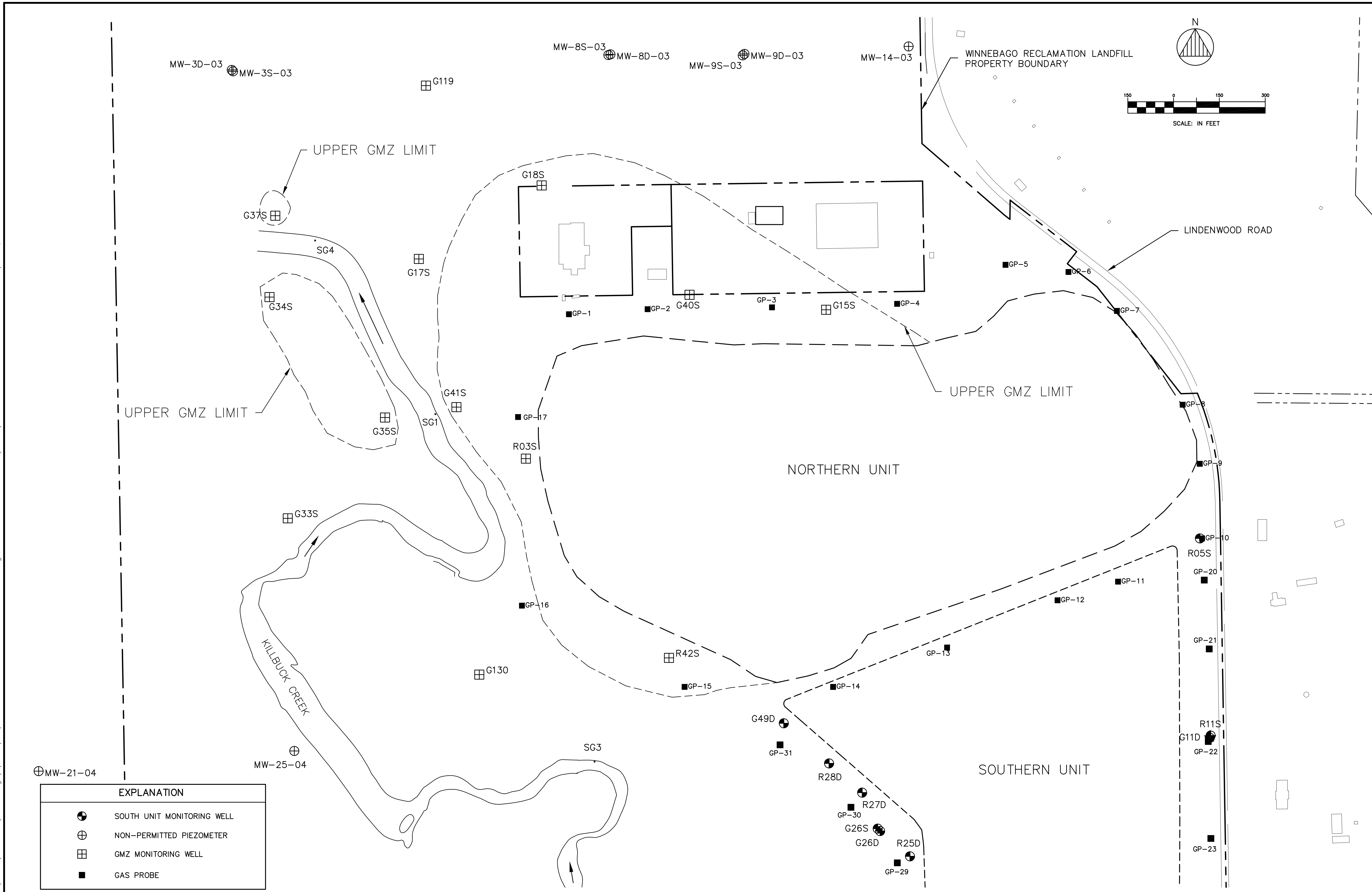
APPROVED BY: SRH DESIGNED BY: SRH DRAWN BY: LJE

1995 LOWER ZONE GMZ EXTENT

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2007
PROJECT ID: 90-114
SHEET NUMBER:
FIG. 4



NOTE:
FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2004.

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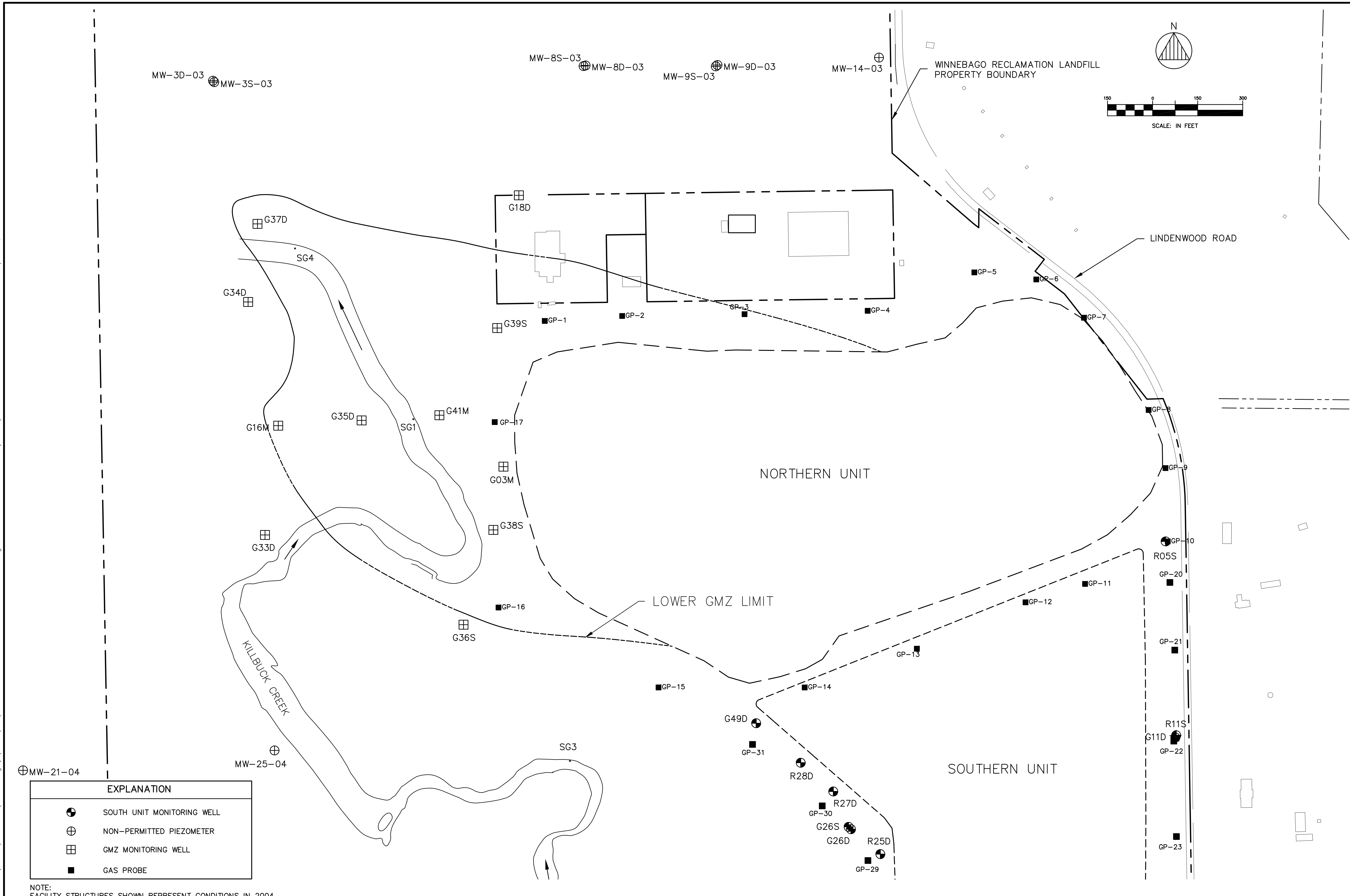
APPROVED BY: SRH DESIGNED BY: SRH DRAWN BY: MPN

2004 UPPER ZONE GMZ EXTENT

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2007
PROJECT ID: 90-114
SHEET NUMBER:

FIG. 5



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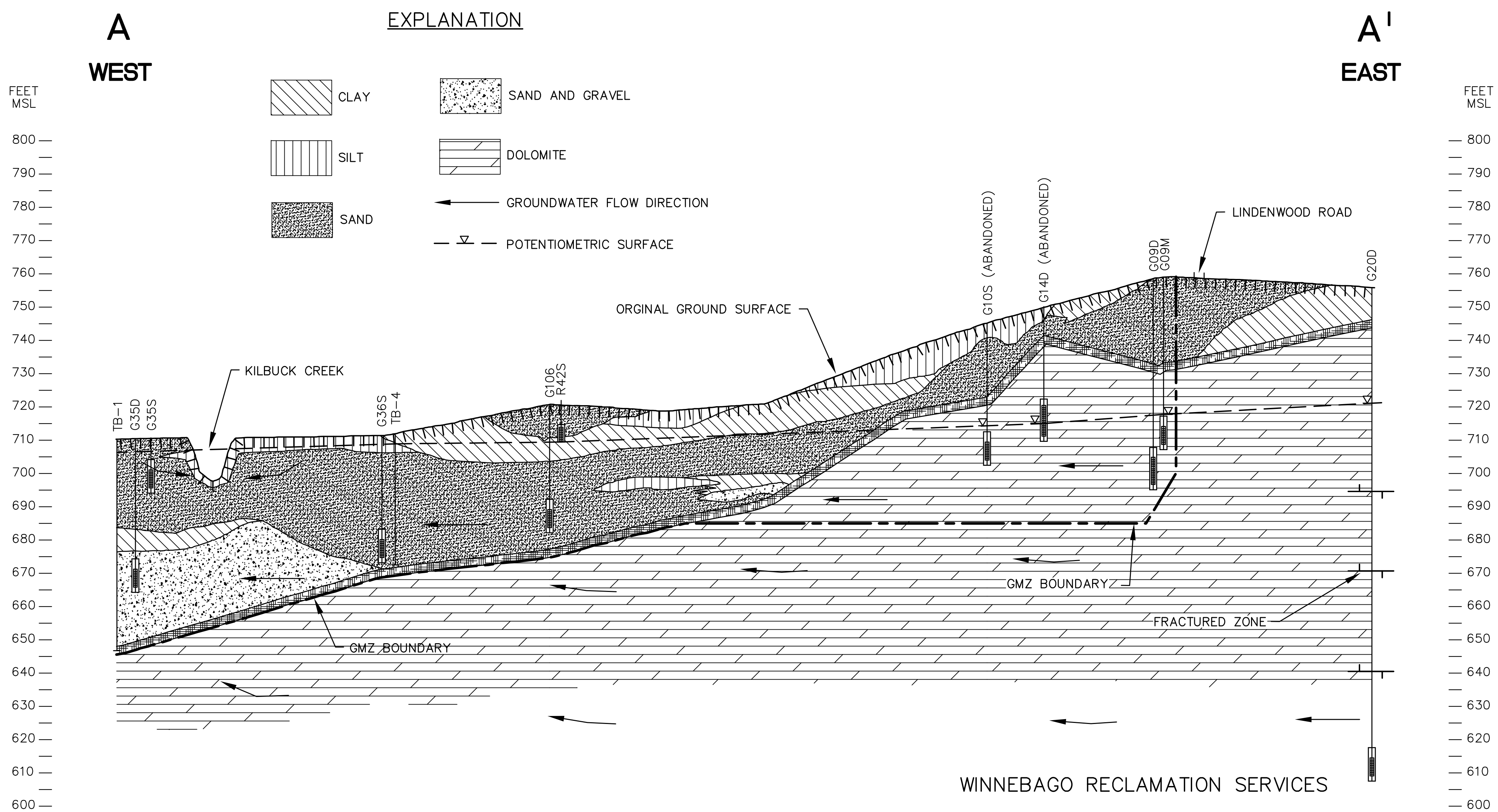
APPROVED BY: SRH | DESIGNED BY: SRH | DRAWN BY: MPN

2004 LOWER ZONE GMZ EXTENT

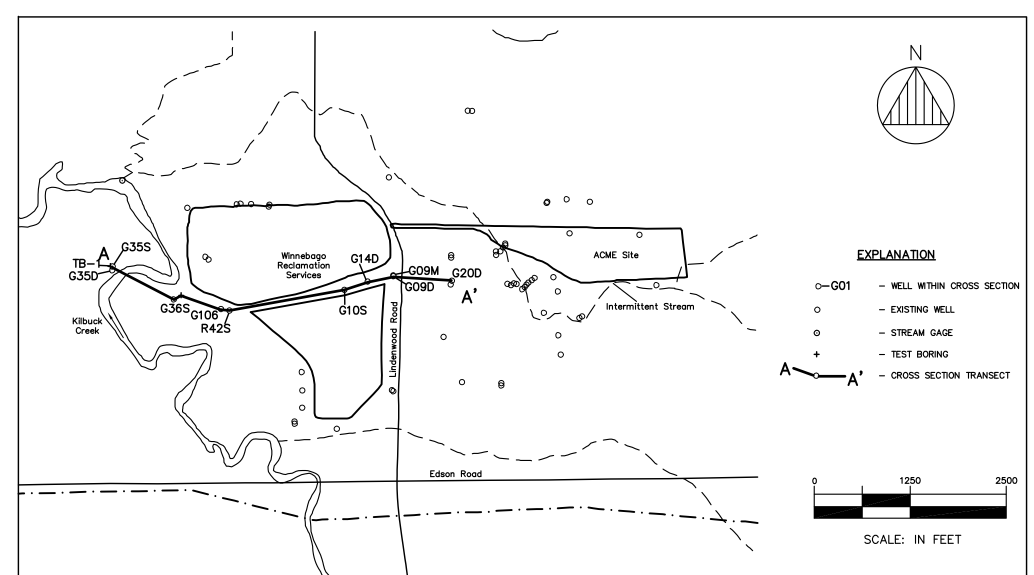
PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2007
PROJECT ID: 90-114
SHEET NUMBER:
FIG. 6

File: J:\1990\90-114 (Winnebago)\DWG\K1\GMZ_OUTLINES 2004 REV 0708-05.dwg Tab: LOWER ZONE (11X17) User: wulewicz Plotted: Apr 20, 2012 - 2:13 PM



WINNEBAGO RECLAMATION SERVICES



400 0 200 400 800

SCALE: IN FEET

GRAPHIC SCALE

10X VERTICAL EXAGGERATION

NOTE:

1. GROUNDWATER ELEVATIONS ARE BASED ON WATER LEVEL DATA COLLECTED SECOND QUARTER 2005.
2. THE DISTANCED BETWEEN BORING LOCATIONS WERE ESTIMATED BASED ON STRAIGHT-LINE TRANSECTS.

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APPROVED BY: SRH
DESIGNED BY: SRH
DRAWN BY: MPN

2004 GMZ VERTICAL BOUNDARY MAP

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

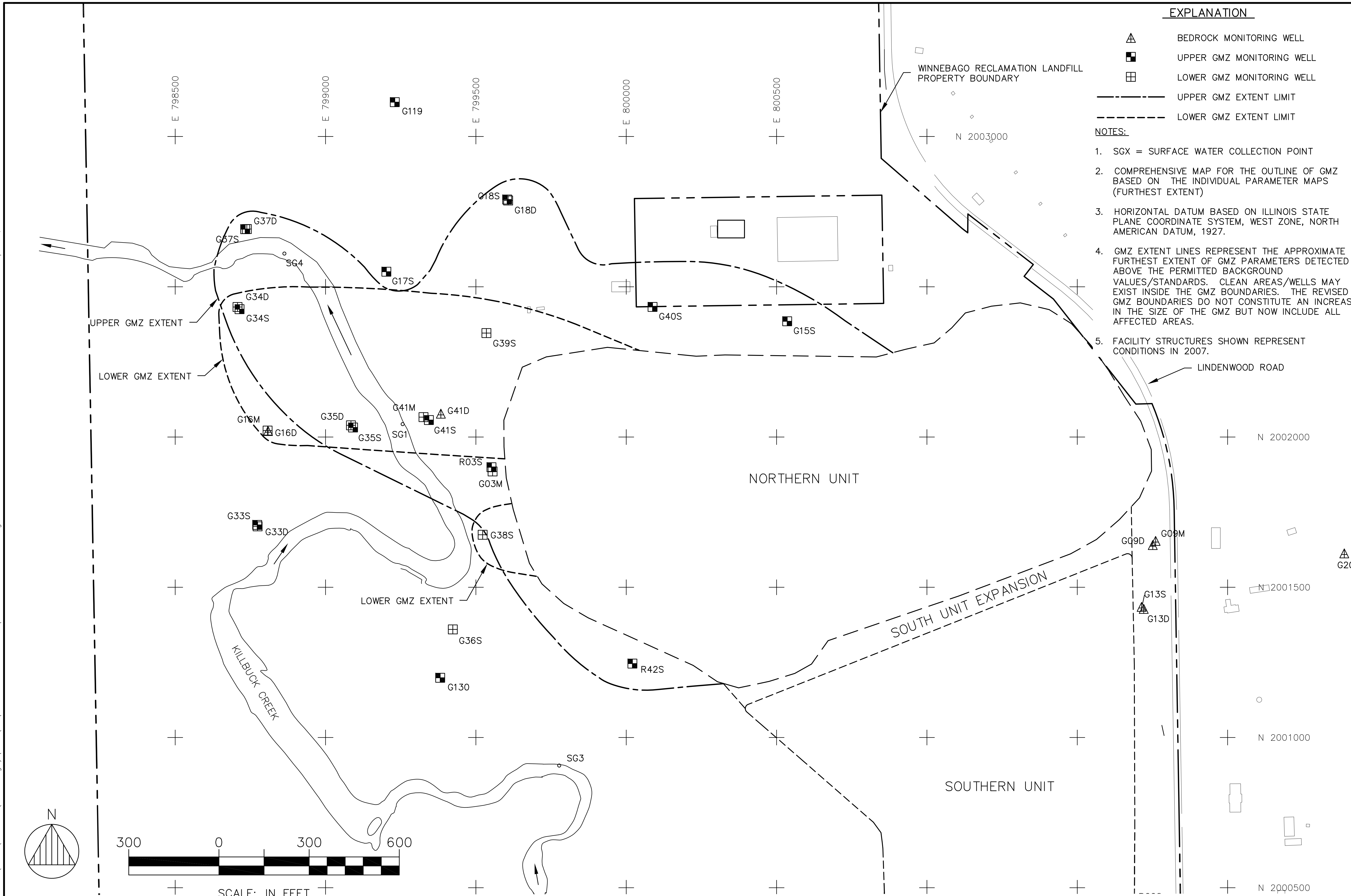
DATE: APRIL 2007

PROJECT ID: 90-114

SHEET NUMBER:

FIG. 7

File: J:\1990\90-114 (Winnebago)\DWG\gmz-bedrock zone xsec.dwg Tab: C-C' (11x17) User: wulewicz Plotted: Apr 10, 2012 - 2:35 PM



ANDREWS ENGINEERING, INC.

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DRAWN BY: LJE
DESIGNED BY: SRH
APPROVED BY: SRH

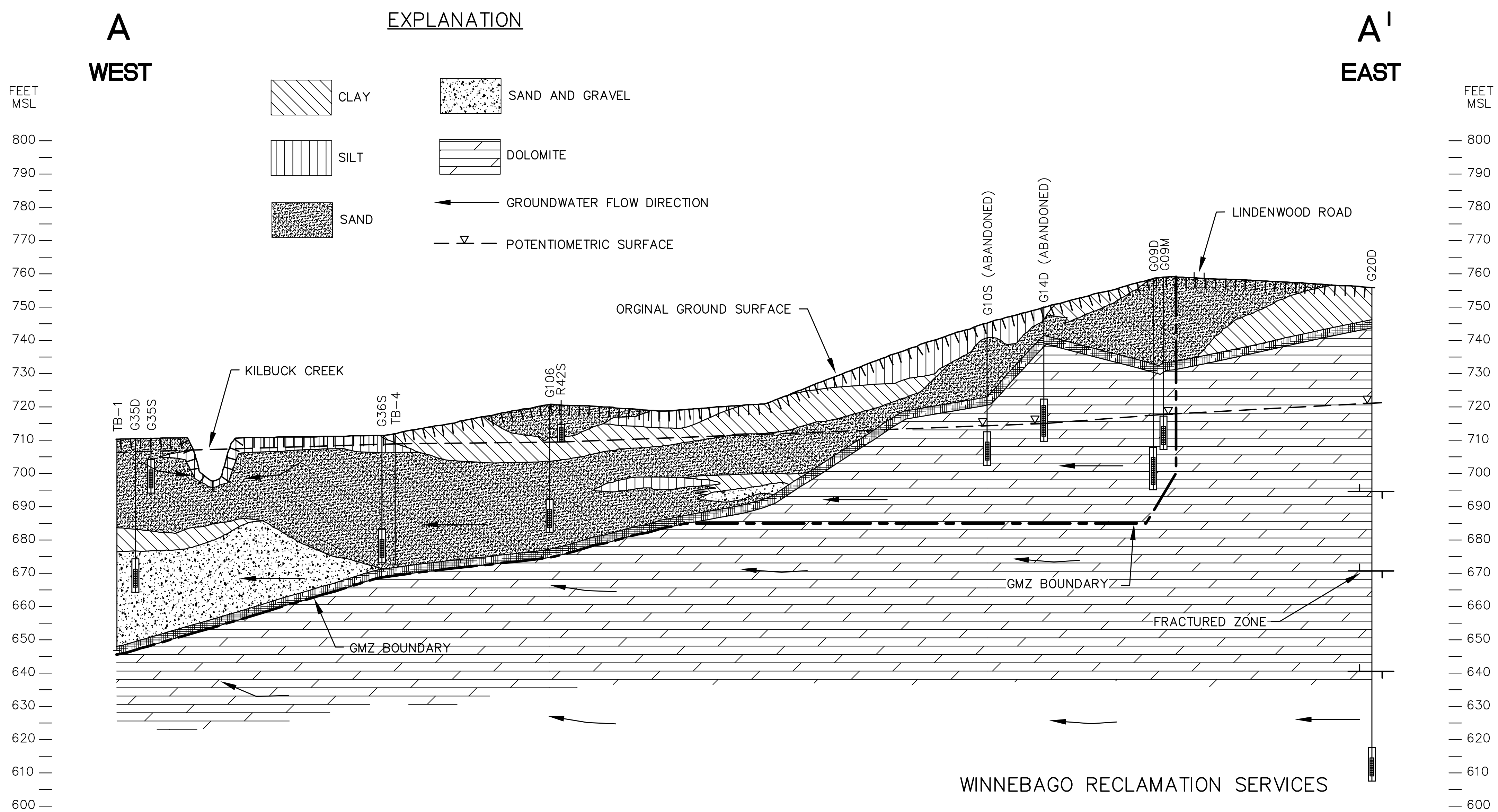
2007 GMZ EXTENT MAP – REVISED

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

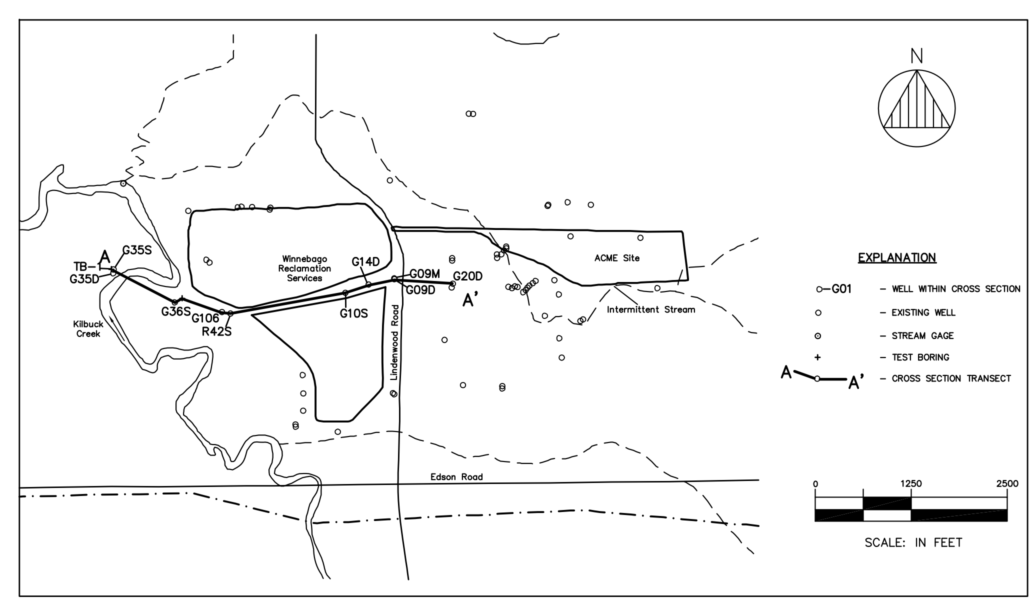
DATE: APRIL 2008
PROJECT ID: 90-114
SHEET NUMBER:

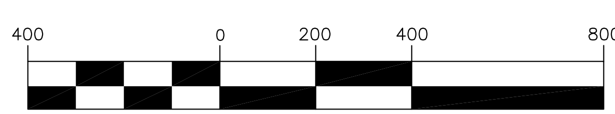
FIG. 8

File: J:\1990\90-114 (Winnebago)\DWG\K1\2008 GMZ INVG DWG\GMZ INVESTIGATION.dwg Tab: GMZ EXTENT REV User: wulewicz Plotted: Apr 20, 2012 - 2:14 PM



WINNEBAGO RECLAMATION SERVICES





SCALE: IN FEET

GRAPHIC SCALE

10X VERTICAL EXAGGERATION

NOTE:

1. GROUNDWATER ELEVATIONS ARE BASED ON WATER LEVEL DATA COLLECTED SECOND QUARTER 2005.
2. THE DISTANCED BETWEEN BORING LOCATIONS WERE ESTIMATED BASED ON STRAIGHT-LINE TRANSECTS.

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APPROVED BY: SRH | DESIGNED BY: SRH | DRAWN BY: MPN

2007 GMZ VERTICAL BOUNDARY MAP

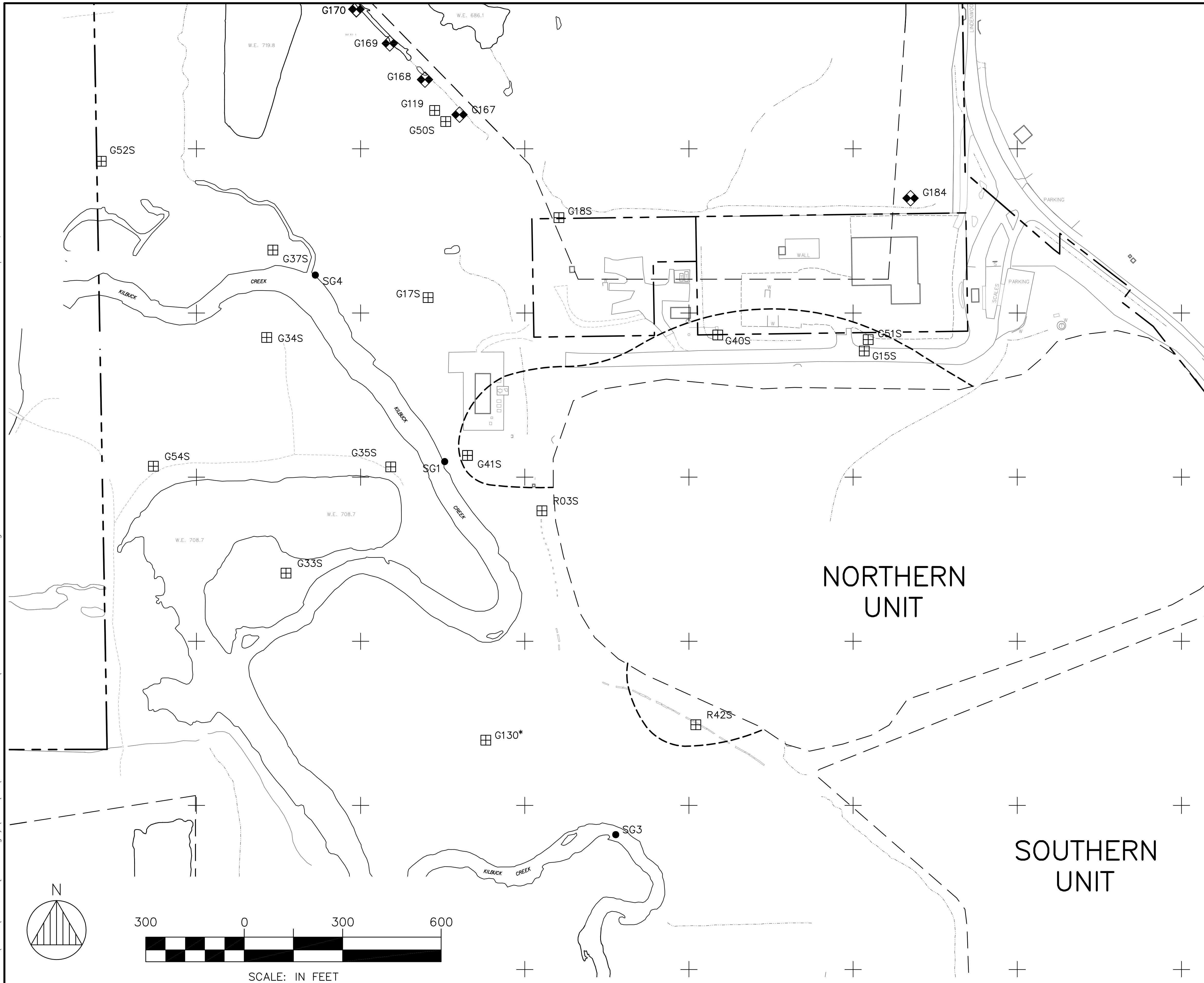
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2007

PROJECT ID: 90-114

SHEET NUMBER:

FIG. 9



EXPLANATION

SOUTHERN UNIT MONITORING WELL

NORTHERN UNIT GMZ MONITORING WELL

NORTH EXPANSION UNIT MONITORING WELL

MAXIMUM GMZ EXTENT LIMIT

NOTES:

1. SGX = SURFACE WATER COLLECTION POINT
2. COMPREHENSIVE MAP FOR THE OUTLINE OF GMZ BASED ON THE INDIVIDUAL PARAMETER MAPS (FURTHEST EXTENT)
3. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
4. FACILITY FEATURES SHOWN REPRESENT CONDITIONS IN 2012.

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APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: WCU

2012 UPPER ZONE GMZ BOUNDARY MAP

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

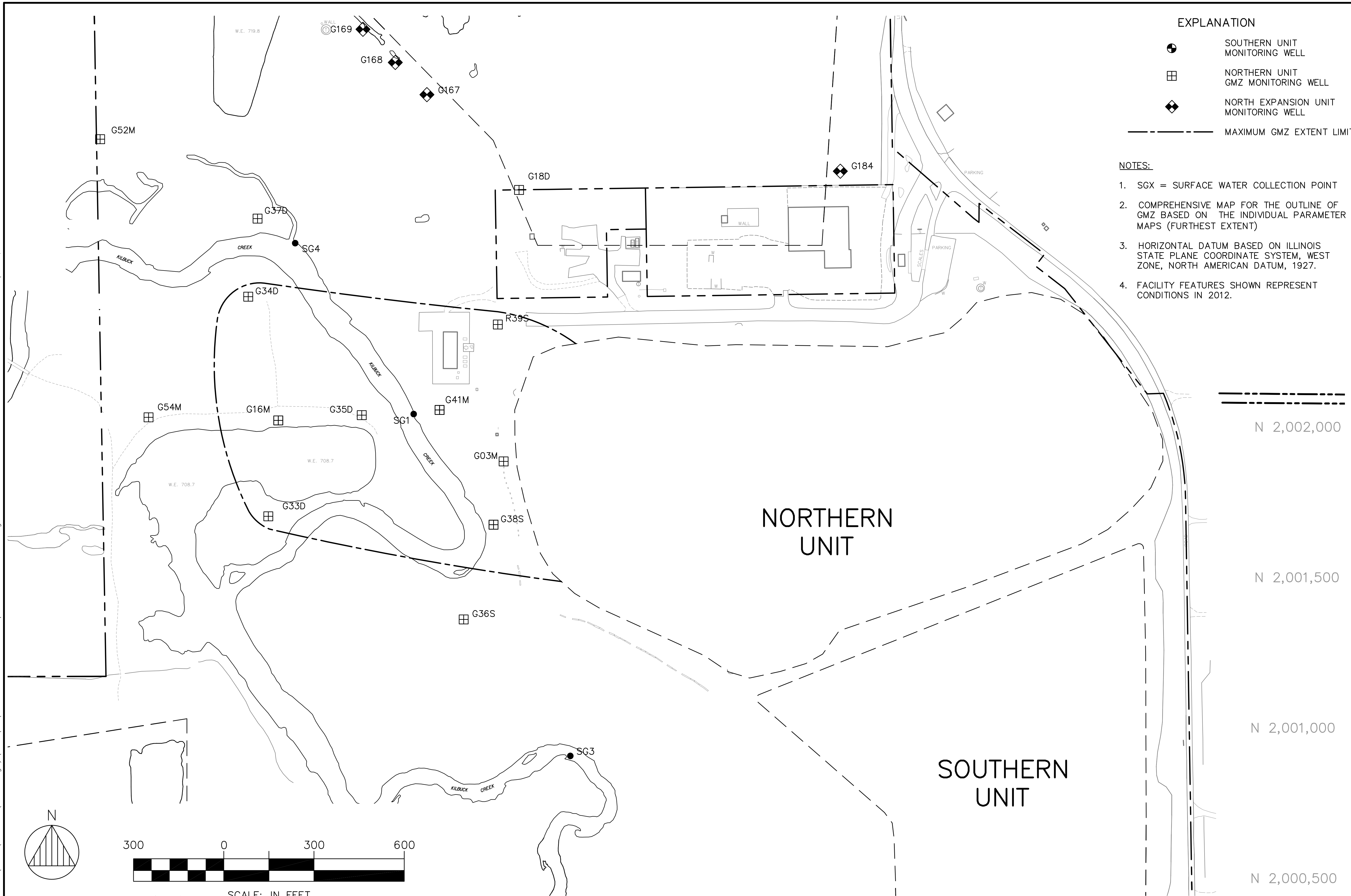
DATE: APRIL 2012

PROJECT ID: 90-114

SHEET NUMBER:

FIG. 10

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\UPPER ZONE GMZ EXTENT.dwg Tab: MAX EXTENT User: wulewicz Plotted: Apr 20, 2012 - 2:15 PM



File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: Max. Extent User: wulewicz Plotted: Apr 20, 2012 – 2:17 PM

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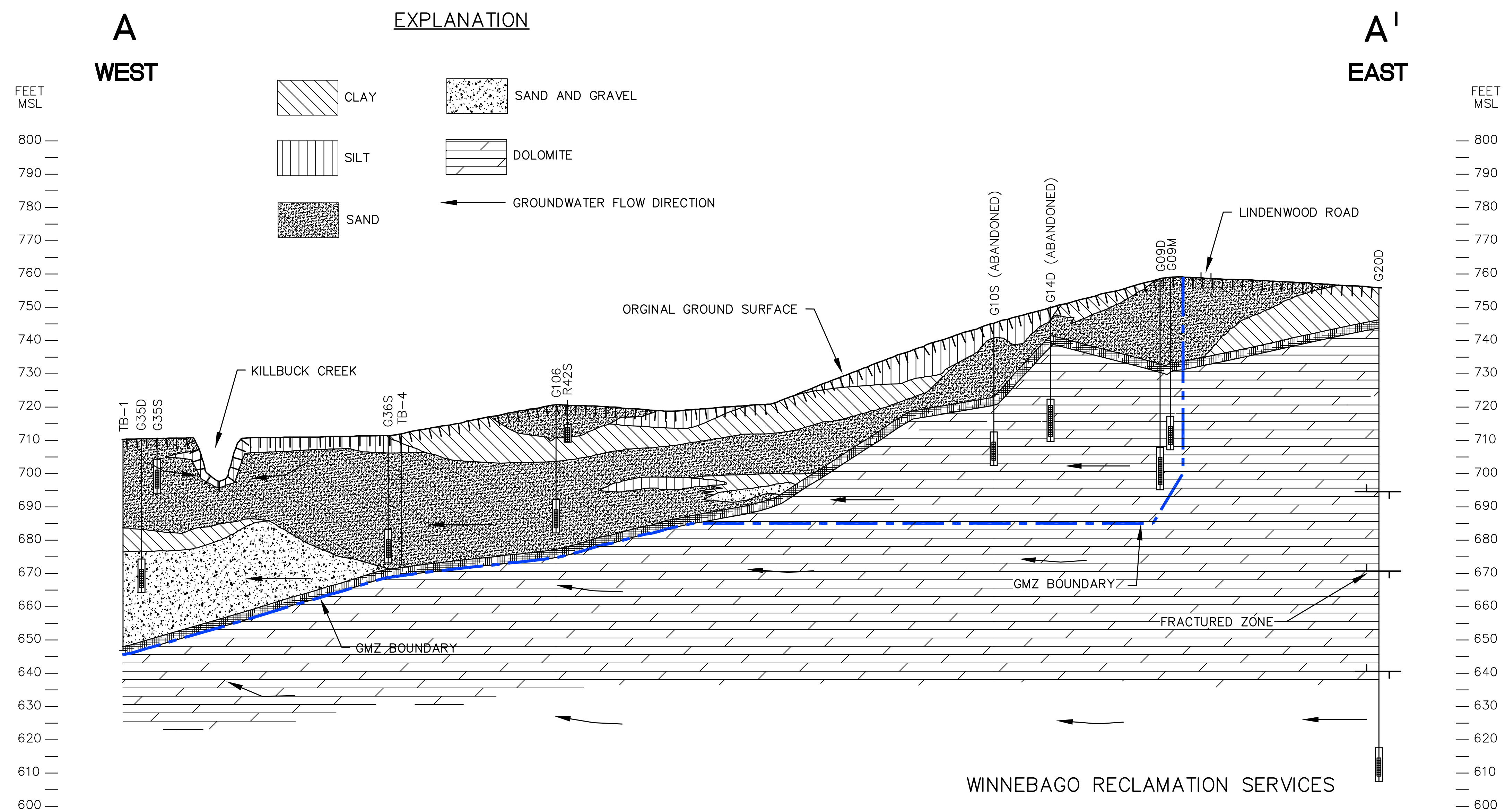
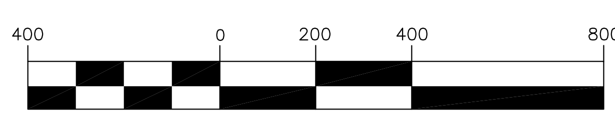
APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: WCU

2012 LOWER ZONE GMZ BOUNDARY MAP

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER:
FIG. 11

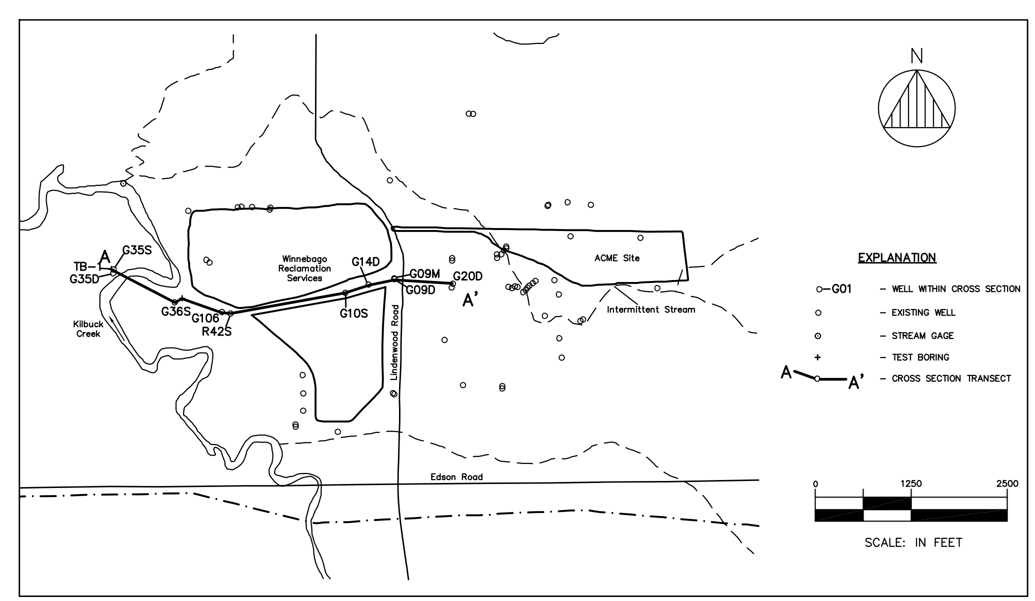




SCALE: IN FEET

GRAPHIC SCALE

10X VERTICAL EXAGGERATION



NOTE:

1. THE DISTANCED BETWEEN BORING LOCATIONS WERE ESTIMATED BASED ON STRAIGHT-LINE TRANSECTS.

File: J:\1990\90-114 (Winnebago)\DWG\gmz-bedrock zone xsec.dwg Tab: fig-12 User: wulewicz Plotted: Apr 11, 2012 - 9:55 AM

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APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: WCU

2012 GMZ VERTICAL BOUNDARY MAP

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012

PROJECT ID: 90-114

SHEET NUMBER:

FIG. 12

APPENDIX A

Application Forms

Illinois
Environmental
Protection Agency

Bureau of Land
1021 North Grand Avenue East
Box 19276
Springfield, IL 62794-9276

Certification of Authenticity of Official Forms

This form must accompany any application submitted to the Illinois EPA Bureau of Land, Division of Land Pollution Control, Permit Section on forms other than the official copy printed and provided by the Illinois EPA. The only allowed changes to the form are in spacing, fonts, and the addition of the information provided. Any additions must be underlined. The forms would not be considered identical if there is any change to, addition or deletion of words on the form or to the language of the form.

The same individuals that sign the application form it accompanies must sign the following certification.

I hereby certify under penalty of law that I have personally examined, and am familiar with the application form or forms and all included supplemental information submitted to the Illinois EPA herewith, and that the official Illinois Environmental Protection Agency application form or forms used herein is or are identical in all respects to the official form or forms provided by the Illinois EPA Bureau of Land Permit Section, and has not or have not been altered, amended, or otherwise modified in any way. I further certify under penalty of law that any attached or included electronic data version of the application form or forms complies with the official Illinois EPA's Electronic version thereof, and is or are identical in all respects to the official electronically downloadable form or forms provided by the Illinois EPA Bureau of Land Permit Section, and has not or have not been altered, amended or otherwise modified in any way.

By: ______________________ 4-12-2012
Owner Signature (date)

Engineering Mgr
Title

By: ______________________ 4-12-2012
Operator Signature (date)

Engineering Mgr
Title

______________________ 5/1/12
Engineer Signature (date)
(if necessary)

Subscribed and Sworn to Before Me,
a Notary Public in and for the
above-mentioned County and State.

____
Notary Public

My Commission Expires: 8-12-12

OFFICIAL SEAL
NICOLE M ROTE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 08/12/12

[Notary Seal]

Illinois Environmental Protection Agency

Bureau of Land • 1021 N. Grand Avenue E. • Box 19276 • Springfield • Illinois • 62794-9276

General Application for Permit
(LPC - PA1)

This form must be used for any application for permit, except for landscape waste composting or hazardous waste management facilities regulated in accordance with RCRA, Subtitle C from the Bureau of Land. One original, and two copies, or three if applicable, of all permit application forms must be submitted. Attach the original and appropriate number of copies of any necessary plans, specifications, reports, etc. to fully support and describe the activities and modifications being proposed. Attach sufficient information to demonstrate the compliance with all regulatory requirements. Incomplete applications will be rejected.

Niote: Permit applications which are hand-deliverd to the Bureau of Land, Permit Section must be delivered to the above address between 8:30 am and 5:00 pm, Monday through Friday (excluding State holidays).

NOTE: Please complete this form online, save a copy locally, print and submit it to the Permit Section #33, at the above address.

I. Site Identification:

Site Name: Winnebago Landfill . IEPA ID Number: 2018080001

Street Address: 8403 Lindenwood Road P.O. Box:

City: Rockford State: IL Zip Code: 61109 County: Winnebago

Existing DE/OP Permit Numbers (if applicable): 1991-138-LF

2. Owner/Operator Identification:

	Owner		Operator
Name:	Winnebago Landfill Company, LLC	Name:	Winnebago Reclamation Service, Inc.
Street Address:	5450 Wansford Way, Suite 201B	Street Address:	5450 Wansford Way, Suite 201B
PO Box:		PO Box:	
City:	Rockford State: IL	City:	Rockford State: IL
Zip Code:	61109 Phone:	Zip Code:	61109 Phone:
Contact:	Tom Hilbert	Contact:	Tom Hilbert
Email Address:	thilbert@rresvcs.com	Email Address:	thilbert@rresvcs.com

TYPE OF SUBMISSION/REVIEW PERIOD:		TYPE OF FACILITY:		TYPE OF WASTE:	
New Landfill/180 days (35 IAC Part 813)	☐	Landfill	☑	General Municipal Refuse	☑
Landfill Expansion/180 days (35 IAC Part 813)	☐	Land Treatment	☐	Hazardous	☐
Sig. Mod. to Operate/90 days (35 IAC Part 813)	☐	Transfer Station	☐	Special (Non-Hazardous)	☑
Other Sig. Mod./90 days (35 IAC Part 813)	☑	Treatment Facility	☐	Chemical Only (exec. putrescible)	☐
Renewal of Landfill/90 days (35 IAC Part 813)	☐	Storage	☐	Inert Only (exec. chem. & putrescible)	☐
Developmental/90 days (35 IAC Part 807)	☐	Incinerator	☐	Used Oil	☐
Operating/45 days (35 IAC Part 807)	☐	Composting	☐	Potentially Infectious Medical Waste	☐
Supplemental/90 days (35 IAC Part 807)	☐	Recycling/Reclamation	☐	Landscape/Yard Waste	☐
Permit Transfer/90 days (35 IAC Part 807)	☐	Other (Specify)	☐	Other (Specify)	☐
Renewal of Experimental Permit (35 IAC Part 807)	☐				

3. Description of this Permit Request:

Five year evaluation of the Groundwater Management Zone in accordance with Permit Condition VIII.23 (Mod.53).

4. Completeness Requirements

The following items must be checked Yes, No or N/A. Each item will be reviewed for completeness by the log clerk. Blank items will result in rejection of the application. Please refer to the instructions for further guidance.

1. Have all required public notice letters been mailed in accordance with the LPC-PA16 instructions? ☑ Yes ☐ No ☐ N/A

(If so, provide a list of those recipients of the required public notice letters for Illinois EPA retention. Such retention shall not imply any Illinois EPA review and/or confirmation of the list.)

Public Notice Recipients

Name: Dave Syverson Title: Senator - District 34
Street Address: 200 South Wyman Street, Suite 302 P.O. Box:
City: Rockford State: IL Zip Code: 61101 Phone:

Name: Charles Jefferson Title: Representative - District 67
Street Address: 200 South Wyman Street, Suite 304 P.O. Box:
City: Rockford State: IL Zip Code: 61101 Phone:

Name: Joseph Bruscato Title: State's Attorney
Street Address: 400 West State Street P.O. Box:
City: Rockford State: IL Zip Code: 61101 Phone:

Name: Scott Christiansen Title: County Chairman
Street Address: 404 Elm Street, Room 504 P.O. Box:
City: Rockford State: IL Zip Code: 61101 Phone:

Name: Village of New Milford Title: Village Clerk
Street Address: 6771 11th Street P.O. Box:
City: Rockford State: IL Zip Code: 61109 Phone:

Name: Village of Davis Junction Title: Village Clerk
Street Address: 106 North Elm Street P.O. Box: 207
City: Davis Junction State: IL Zip Code: 61020 Phone:

Name: Cherry Valley Township Title:
Street Address: 4875 Blackhawk Road P.O. Box:
City: Rockford State: IL Zip Code: 61109 Phone:

2. a. Is the Siting Certification Form (LPC-PA8) completed and enclosed? ☐ Yes ☑ No ☐ N/A

b. Is siting approval currently under litigation? ☐ Yes ☑ No ☐ N/A

3. a. Is a closure, and if necessary a post-closure plan covering these activities being submitted, or ☐ Yes ☑ No ☐ N/A

   b. has one already been approved? If yes, provide the permit number: 1991-138

4. a. For waste disposal sites, only: Has any employee, owner, operator, officer or director of the owner or operator had a prior conduct certification denied, canceled or revoked? ☐ Yes ☑ No ☐ N/A

   b. Have you included a demonstration of how you comply or intend to comply with 35 Ill. Adm. Code 745? ☐ Yes ☐ No ☑ N/A

5. a. Is land ownership held in beneficial trust? ☐ Yes ☑ No ☐ N/A

   b. If yes, is a beneficial trust certification form (LPC-PA9) completed and enclosed? ☐ Yes ☐ No ☑ N/A

6. a. Does the application contain information or proposals regarding the hydrogeology; groundwater monitoring, modeling or classification; a groundwater impact assessment; or vadose zone monitoring for which you are requesting approval? ☑ Yes ☐ No ☐ N/A

   b. If yes, have you submitted a third copy of the application (4 total) and supporting documents? ☑ Yes ☐ No ☐ N/A

5. Signatures:

Original signatures are required. Signature stamps or applications transmitted electronically or by FAX are not acceptable.

All applications shall be signed by the person designated below as a duly authorized representative of the owner an/or operator.

Corporation - By a principal executive officer of the level of vice-president or above.
Partnership or Sole Proprietorship - By a general partner or the proprietor, respectively.
Government - By either a principal executive officer or a ranking elected official.

A person is a duly authorized representative of the owner and operator only if:

1. They meet the criteria above or the authorization has been granted in writing by a person described above; and
2. Is submitted with this application (a copy of a previously submitted authorization can be used).

I hereby affirm that all information contained in this application is true and accurate to the best of my knowledge and belief. I do herein swear that I am a duly authorized representative of the owner/operator and I am authorized to sign this permit application form.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature: [signature] Date: 4-12-2012

Printed Name: Thomas Hilbert Title: Engineering Mgr

OFFICIAL SEAL
NICOLE M ROTE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 08/12/12

Notary: Subscribed and Sworn before me this 12th day of April 2012

My commission expires on: 8-12-12

Signature & Stamp/Seal of Notary Public: Nicole M Rote

Operator Signature: [signature] Date: 4-12-2012

Printed Name: Thomas Hilbert Title: Engineering Mgr

OFFICIAL SEAL
NICOLE M ROTE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 08/12/12

Notary: Subscribed and Sworn before me this 12th day of April 2012

My commission expires on: 8-12-12

Signature & Stamp/Seal of Notary Public: Nicole M Rote

Engineer's Name: Douglas W. Mauntel Engineer's Ttle: Project Engineering

Company: Andrews Engineering, Inc. Registration Number: 062-054530

Street Address: 3300 Ginger Creek Drive PO Box:

City: Springfield State: IL Zip Code: 62711 Phone: 217-787-2334

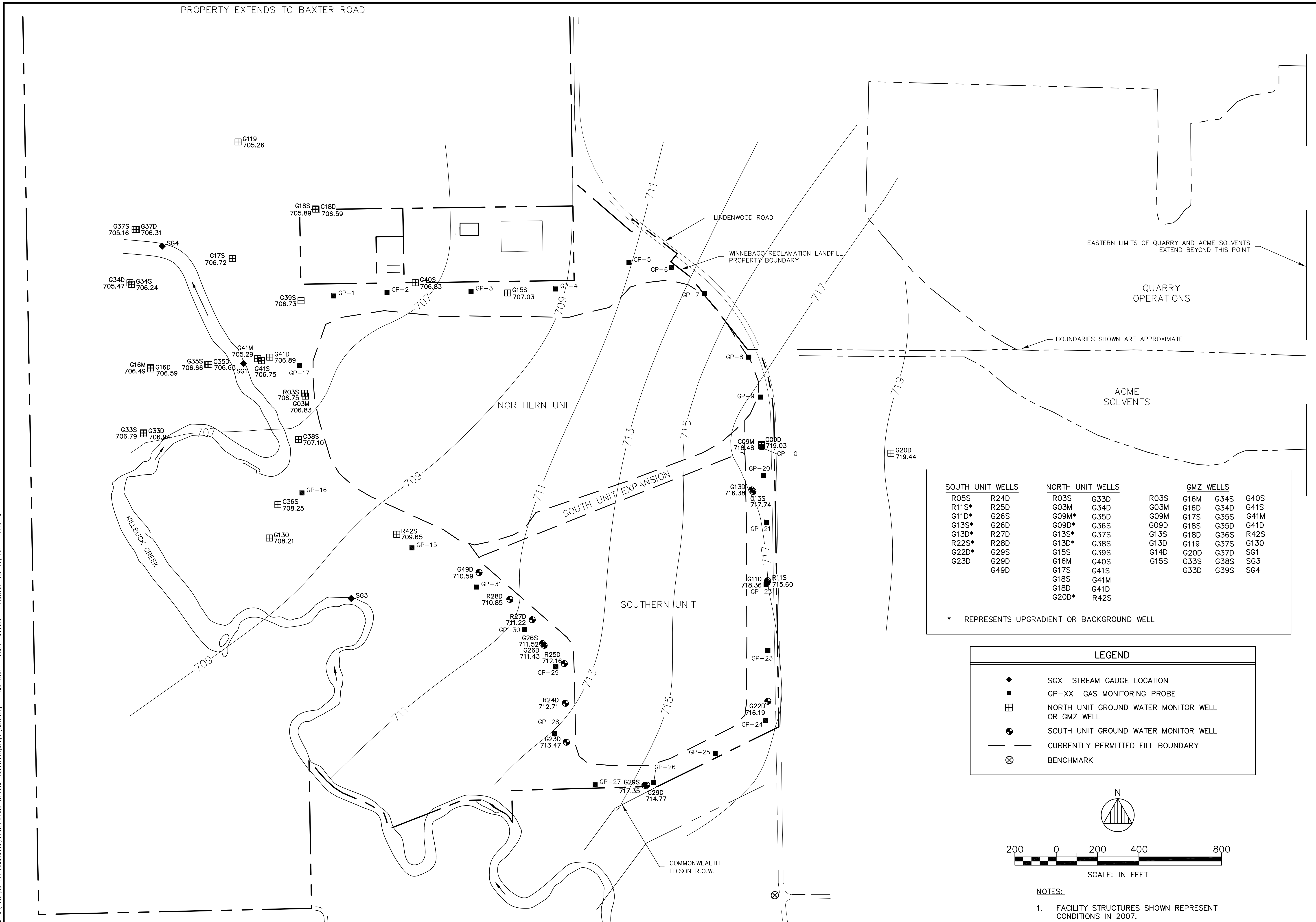
Email Address: dwmauntel@andrews-eng.com License Expiration Date: 11/30/13

DOUGLAS W. MAUNTEL
062-054530
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

Signature: [signature] Date: 5/1/12 Professional Engineer's Seal:

APPENDIX B

Quarterly Potentiometric Surface Maps



SOUTH UNIT WELLS		NORTH UNIT WELLS		GMZ WELLS			
R05S	R24D	R03S	G33D	R03S	G16M	G34S	G40S
R11S*	R25D	G03M	G34D	G03M	G16D	G34D	G41S
G11D*	G26S	G09M*	G35D	G09M	G17S	G35S	G41M
G13S*	G26D	G09D*	G36S	G09D	G18S	G35D	G41D
G13D*	R27D	G13S*	G37S	G13S	G18D	G36S	R42S
R22S*	R28D	G13D*	G38S	G13D	G119	G37S	G130
G22D*	G29S	G15S	G39S	G14D	G20D	G37D	SG1
G23D	G29D	G16M	G40S	G15S	G33S	G38S	SG3
	G49D	G17S	G41S		G33D	G39S	SG4
		G18S	G41M				
		G18D	G41D				
		G20D*	R42S				

* REPRESENTS UPGRADIENT OR BACKGROUND WELL

LEGEND

- SGX STREAM GAUGE LOCATION
- GP-XX GAS MONITORING PROBE
- NORTH UNIT GROUND WATER MONITOR WELL OR GMZ WELL
- SOUTH UNIT GROUND WATER MONITOR WELL
- CURRENTLY PERMITTED FILL BOUNDARY
- BENCHMARK

NOTES:

1. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2007.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: SRH DESIGNED BY: SRH DRAWN BY: LJE

POTENTIOMETRIC SURFACE MAP - 1ST QUARTER 2007

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: MARCH 2007
PROJECT ID: 90-114
SHEET NUMBER: B-1

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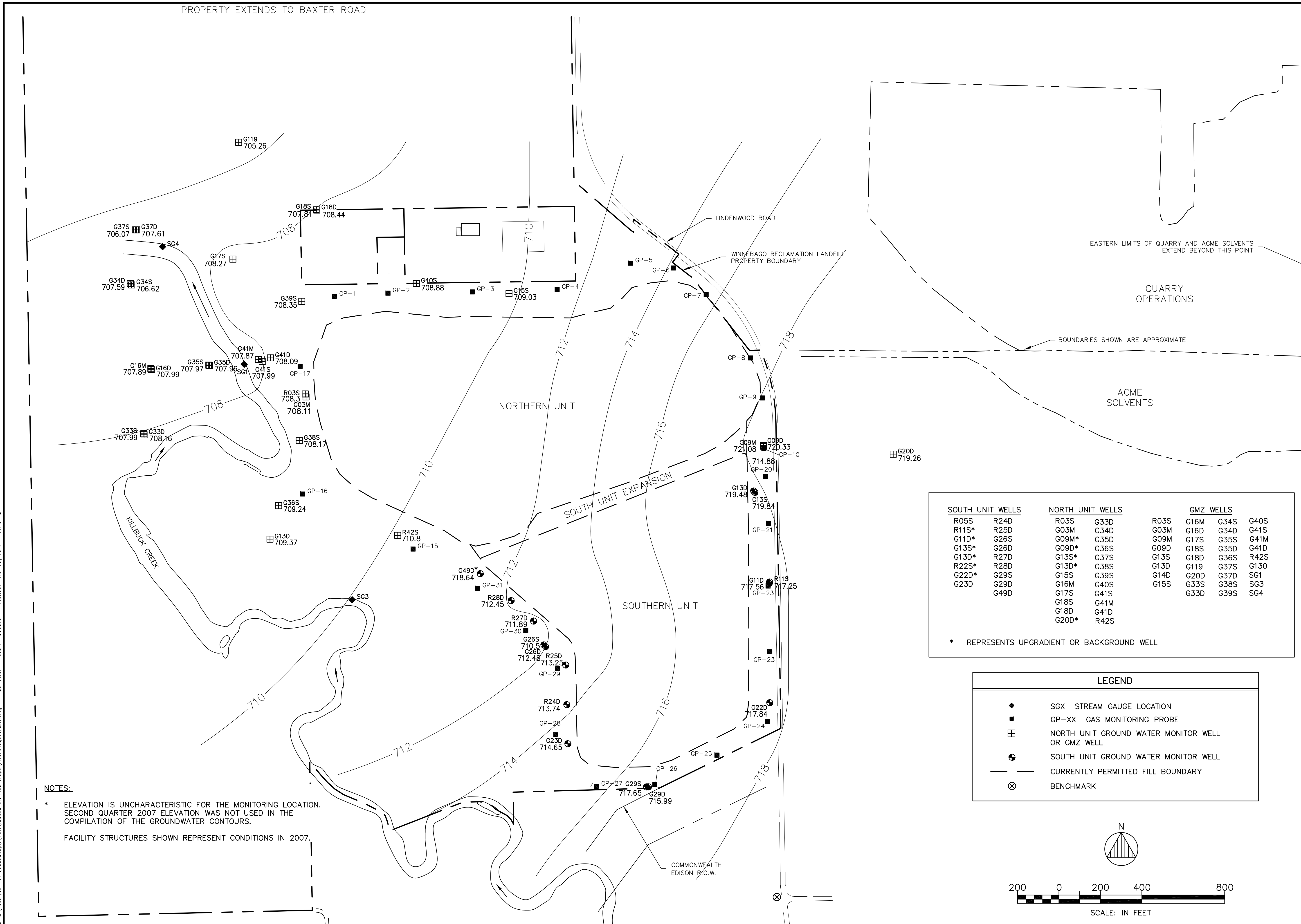

SOUTH UNIT WELLS	
R05S	R24D
R11S*	R25D
G11D*	G26S
G13S*	G26D
G13D*	R27D
R22S*	R28D
G22D*	G29S
G23D	G29D
	G49D

NORTH UNIT WELLS	
R03S	G33D
G03M	G34D
G09M*	G35D
G09D*	G36S
G13S*	G37S
G13D*	G38S
G15S	G39S
G16M	G40S
G17S	G41S
G18S	G41M
G18D	G41D
G20D*	R42S

GMZ WELLS			
R03S	G16M	G34S	G40S
G03M	G16D	G34D	G41S
G09M	G17S	G35S	G41M
G09D	G18S	G35D	G41D
G13S	G18D	G36S	R42S
G13D	G119	G37S	G130
G14D	G20D	G37D	SG1
G15S	G33S	G38S	SG3
	G33D	G39S	SG4

* REPRESENTS UPGRADIENT OR BACKGROUND WELL

LEGEND

- ◆ SGX STREAM GAUGE LOCATION
- ■ GP-XX GAS MONITORING PROBE
- ⊞ NORTH UNIT GROUND WATER MONITOR WELL OR GMZ WELL
- SOUTH UNIT GROUND WATER MONITOR WELL
- — — CURRENTLY PERMITTED FILL BOUNDARY
- ⊗ BENCHMARK

NOTES:

* ELEVATION IS UNCHARACTERISTIC FOR THE MONITORING LOCATION. SECOND QUARTER 2007 ELEVATION WAS NOT USED IN THE COMPILATION OF THE GROUNDWATER CONTOURS.

FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2007.

NO.	DATE	REVISIONS DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: SRH DESIGNED BY: SRH DRAWN BY: LJE

POTENTIOMETRIC SURFACE MAP – 2ND QUARTER 2007

PLANS PREPARED FOR
WINNEBAGO RECLAMATION SERVICE, INC.
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: JULY 2007
PROJECT ID: 90-114
SHEET NUMBER: B-2

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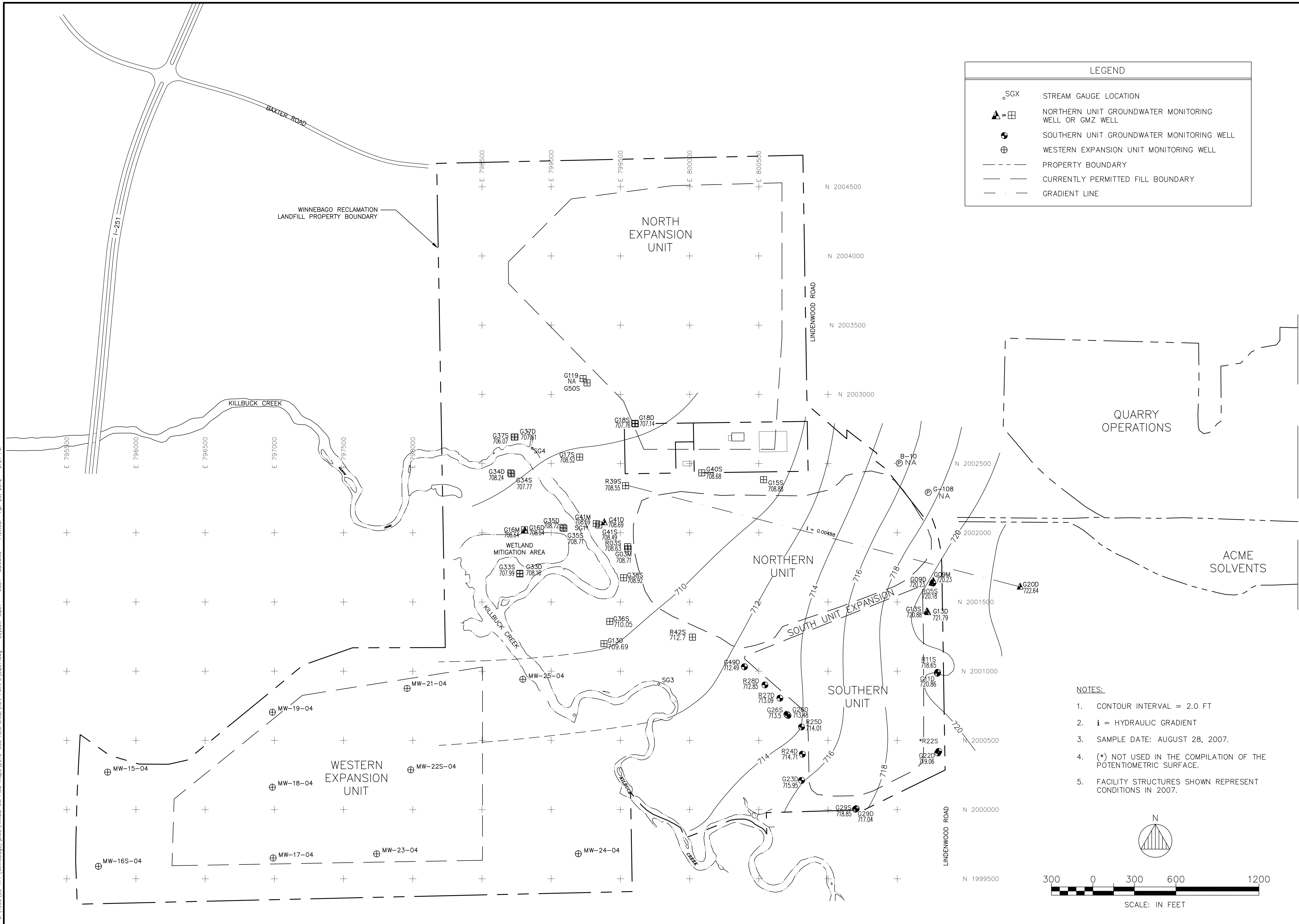

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REVISIONS

NO.	DATE	DESCRIPTION	BY

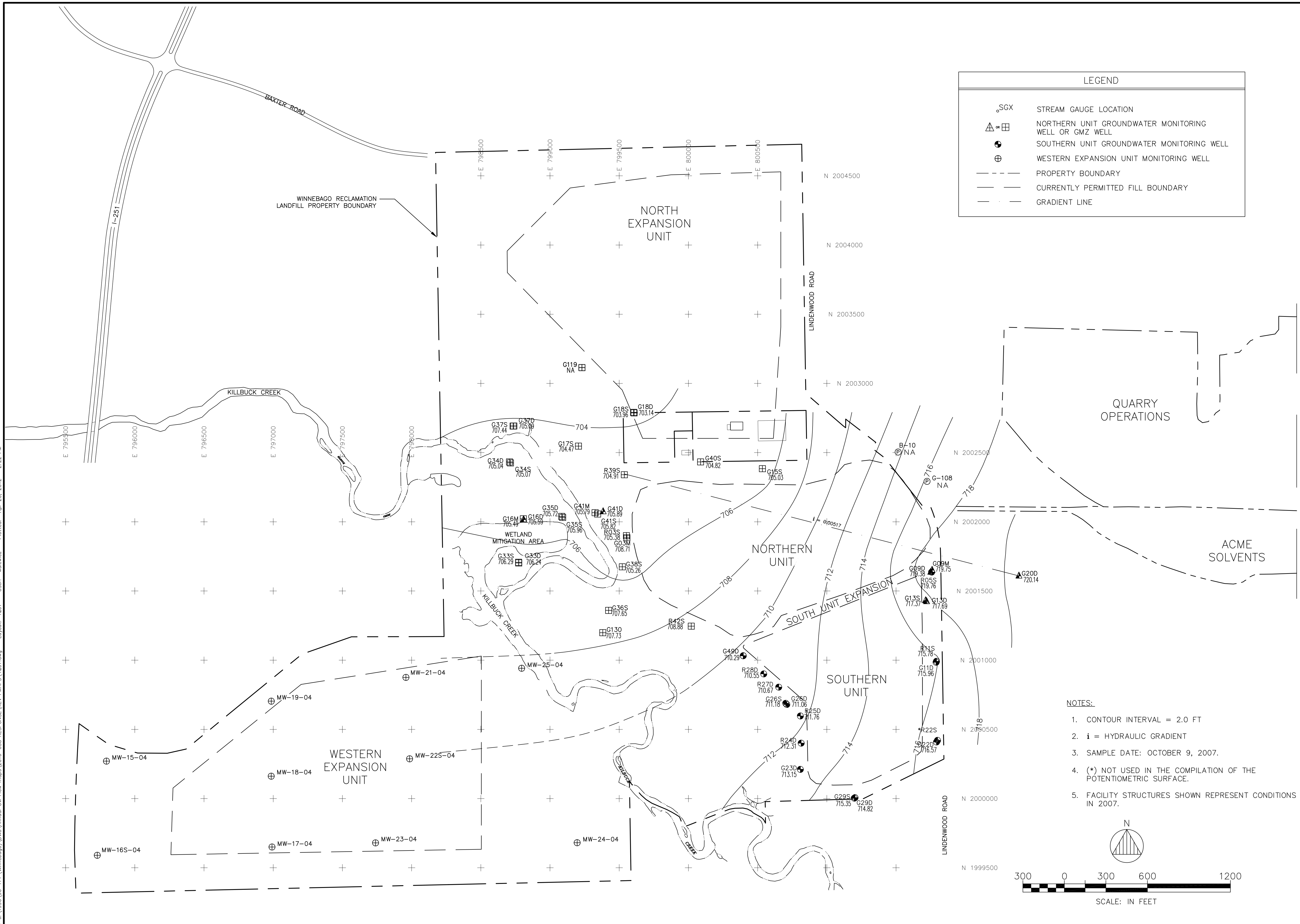
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2007

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-3



REVISIONS

NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.

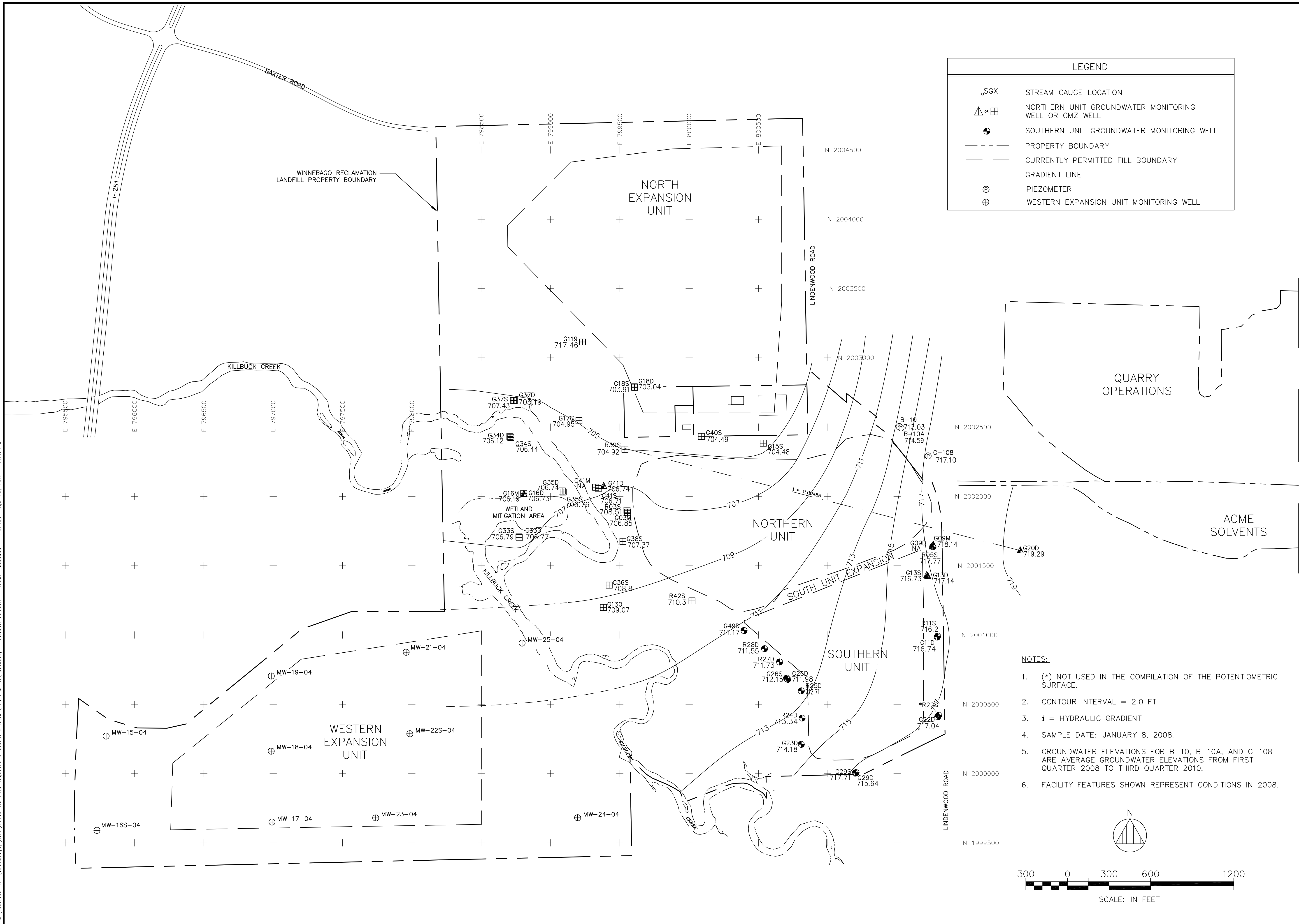
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2007

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-4



LEGEND

- SGX — STREAM GAUGE LOCATION
- NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
- SOUTHERN UNIT GROUNDWATER MONITORING WELL
- PROPERTY BOUNDARY
- CURRENTLY PERMITTED FILL BOUNDARY
- GRADIENT LINE
- PIEZOMETER
- WESTERN EXPANSION UNIT MONITORING WELL

NOTES:

1. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
2. CONTOUR INTERVAL = 2.0 FT
3. i = HYDRAULIC GRADIENT
4. SAMPLE DATE: JANUARY 8, 2008.
5. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
6. FACILITY FEATURES SHOWN REPRESENT CONDITIONS IN 2008.

N

300 0 300 600 1200

SCALE: IN FEET

REVISIONS

NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.

3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
1ST QUARTER 2008

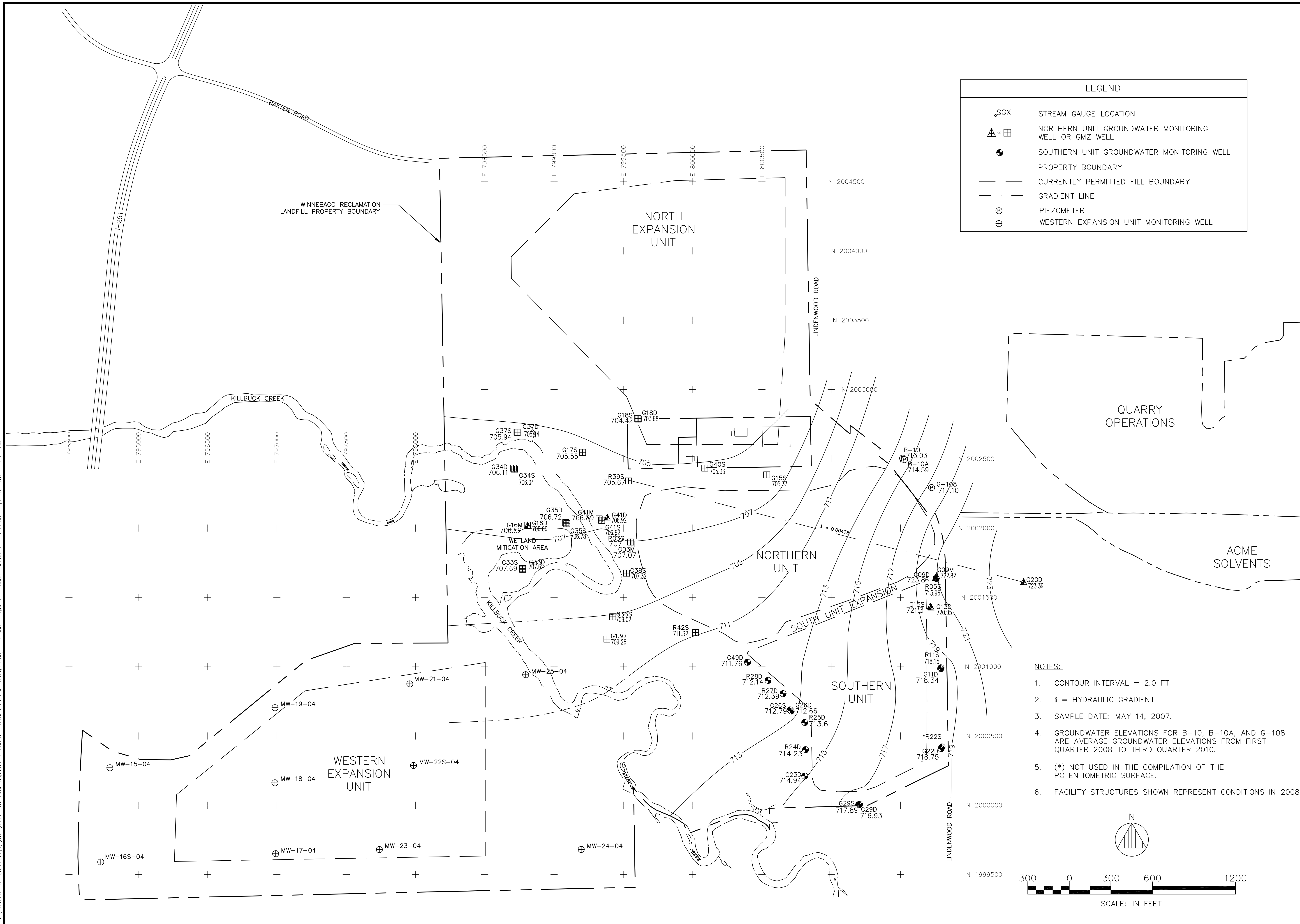
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010

PROJECT ID: 90-114

SHEET NUMBER:

B-5



LEGEND

SGX	STREAM GAUGE LOCATION
	NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
	SOUTHERN UNIT GROUNDWATER MONITORING WELL
	PROPERTY BOUNDARY
	CURRENTLY PERMITTED FILL BOUNDARY
	GRADIENT LINE
P	PIEZOMETER
	WESTERN EXPANSION UNIT MONITORING WELL

NOTES:

1. CONTOUR INTERVAL = 2.0 FT
2. i = HYDRAULIC GRADIENT
3. SAMPLE DATE: MAY 14, 2007.
4. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
6. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2008.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
2ND QUARTER 2008

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKRORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER: B-6

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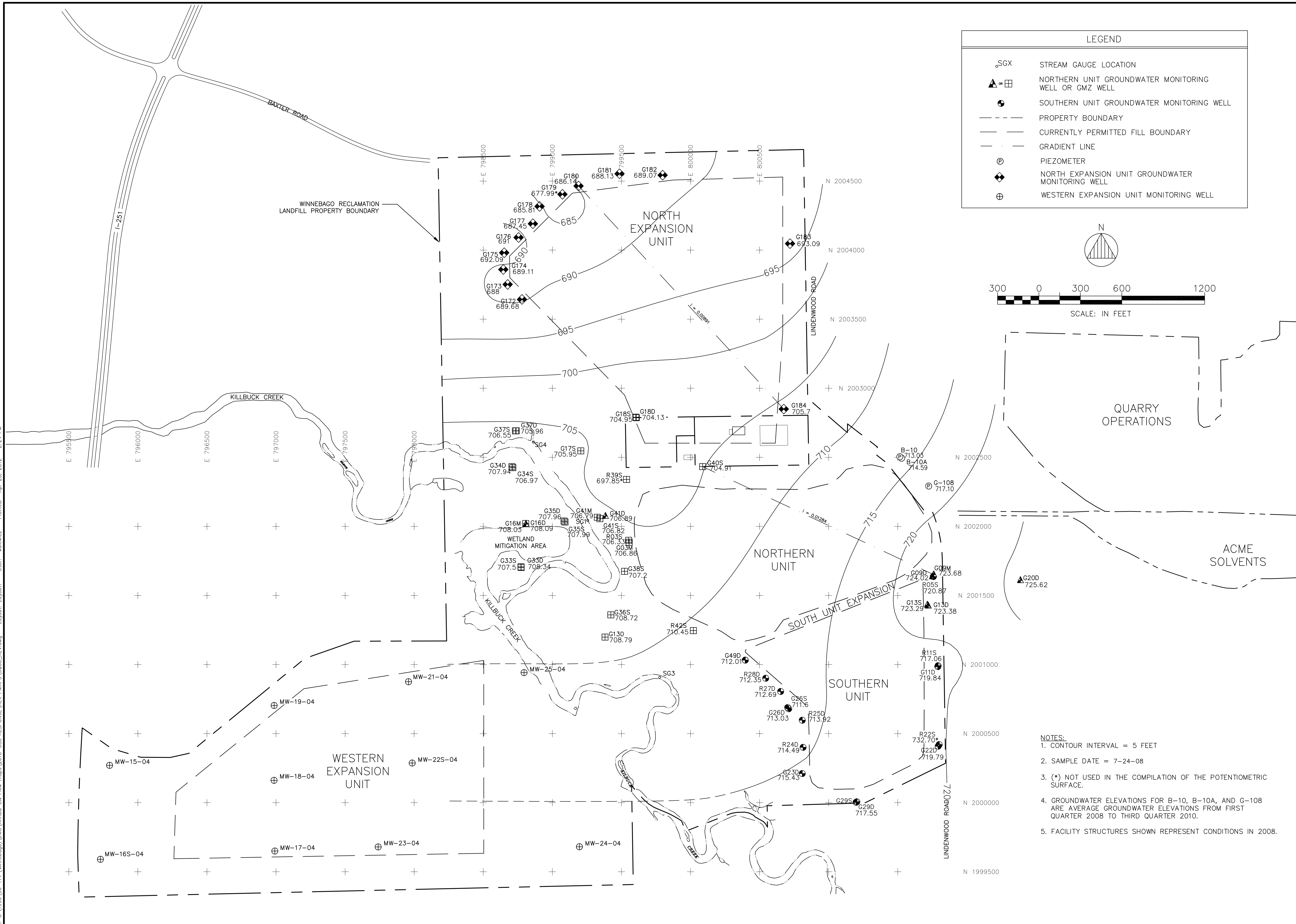


REVISIONS

NO.	DATE	DESCRIPTION	BY

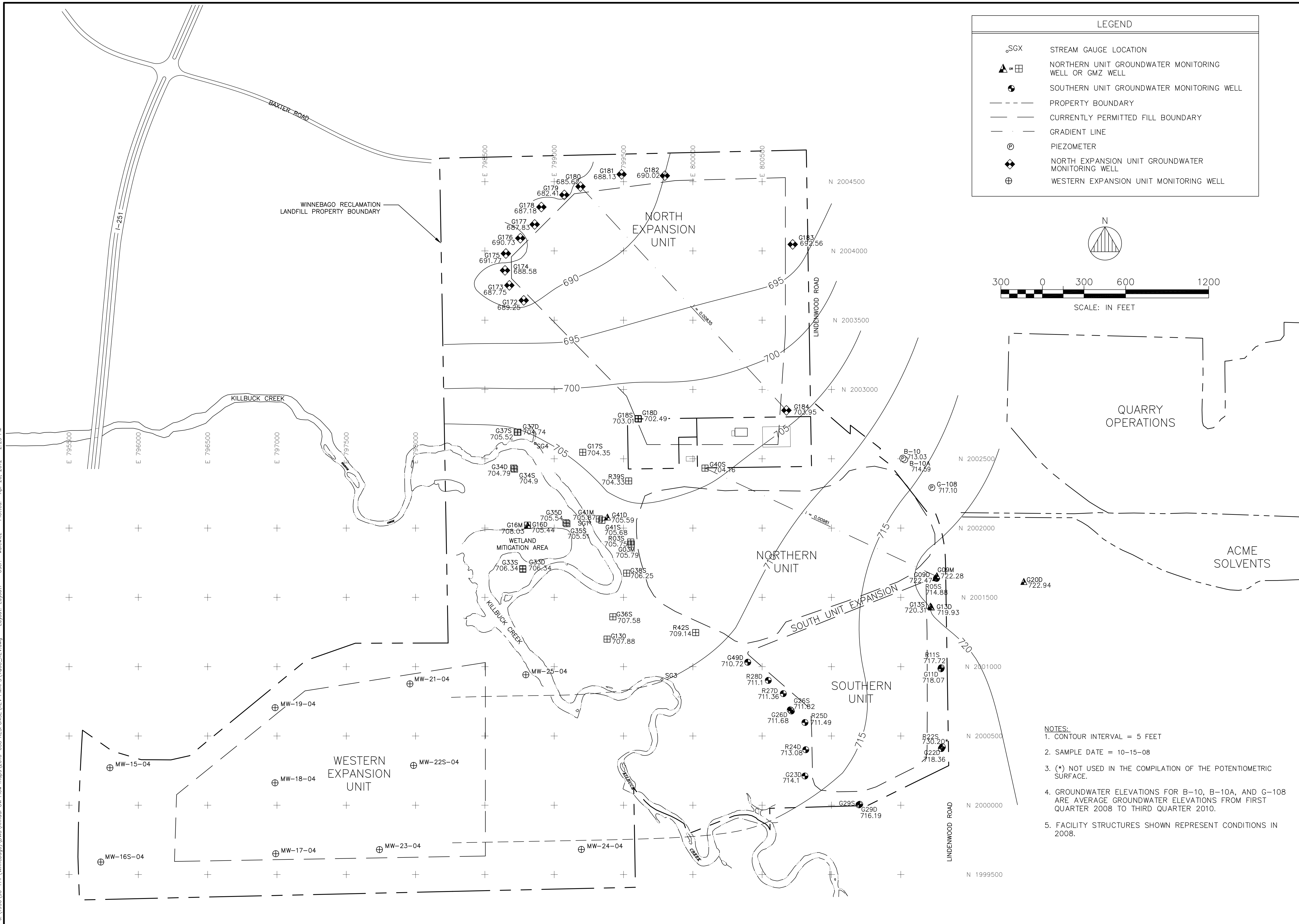
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2008

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER: B-7



NOTES:
1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 10-15-08
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2008.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

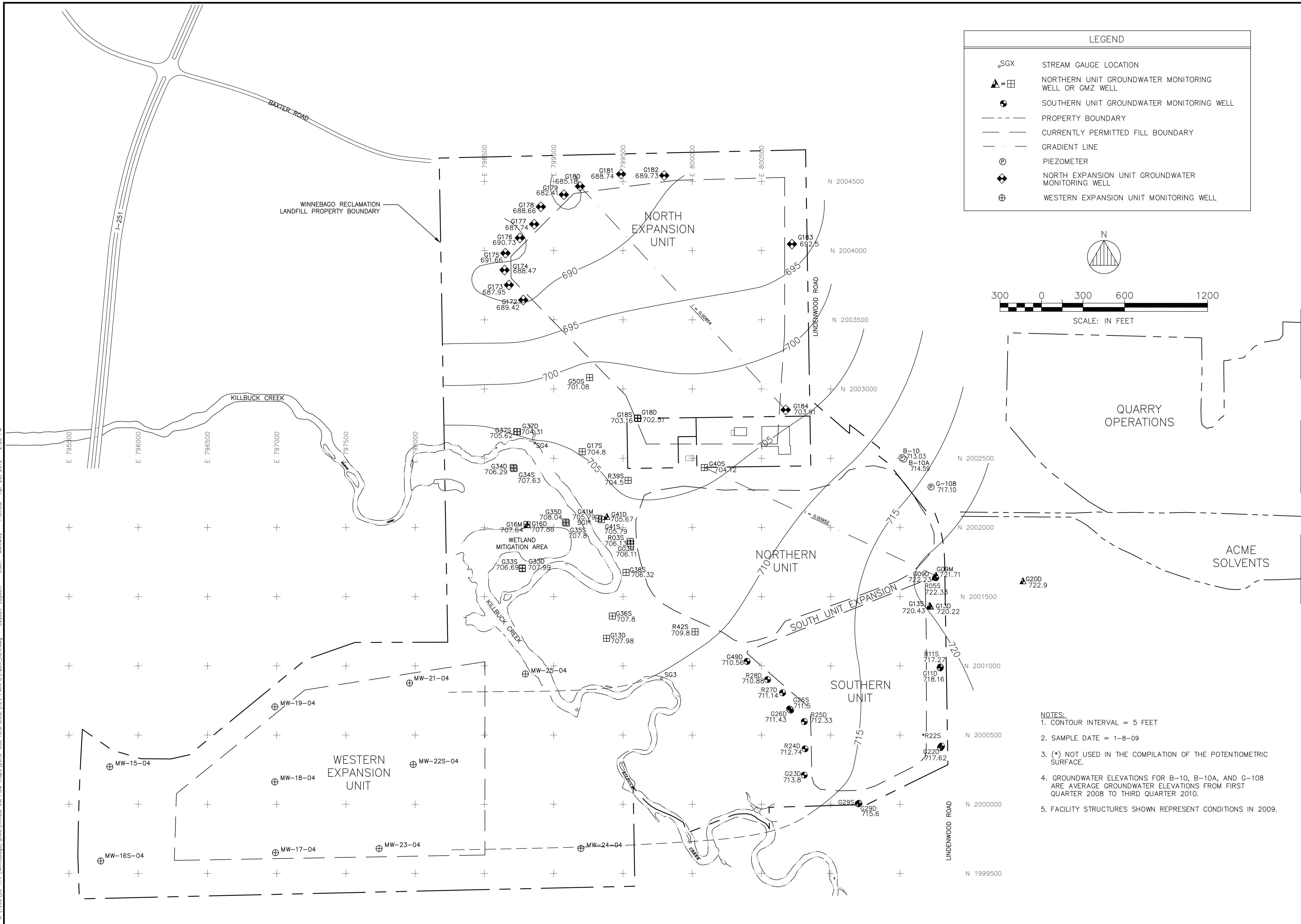
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2008

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-8



NOTES:
1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 1-8-09
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2009.

REVISIONS
NO. | DATE | DESCRIPTION | BY

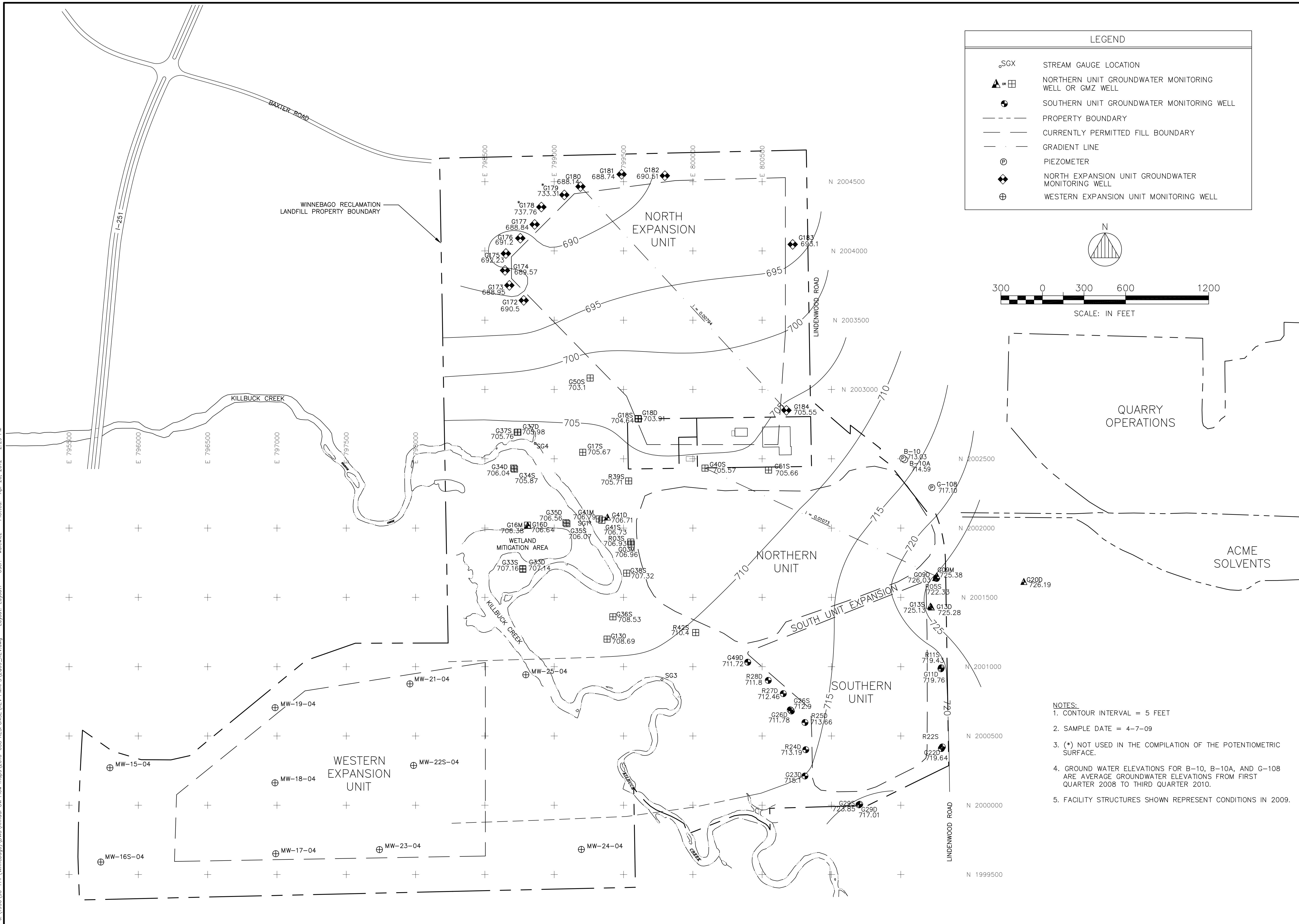
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR
DESIGNED BY: JLR
DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
1ST QUARTER 2009

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER: B-9



NOTES:
1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 4-7-09
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. GROUND WATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2009.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
2ND QUARTER 2009

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-10

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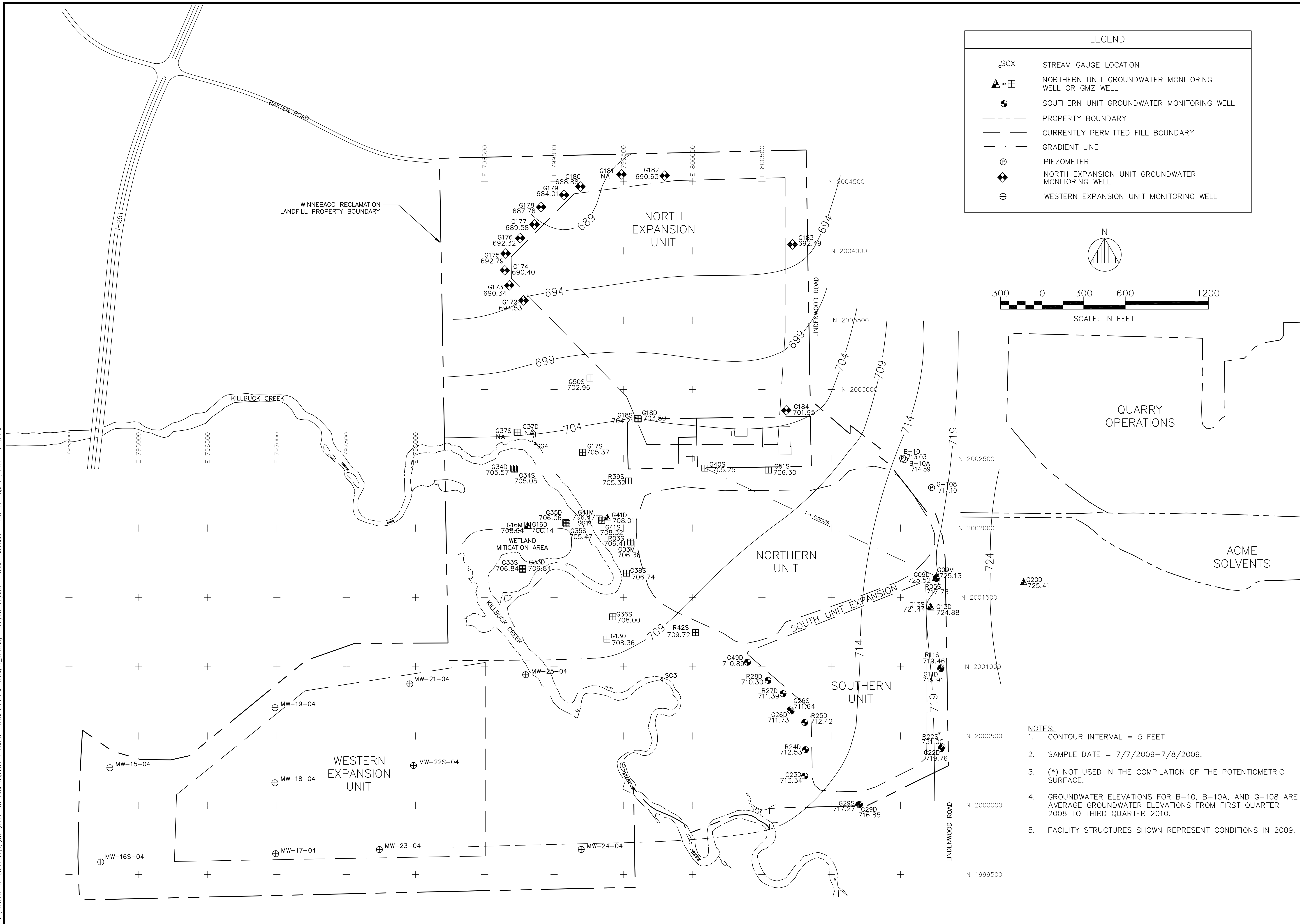

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NO.	DATE	REVISIONS DESCRIPTION	BY

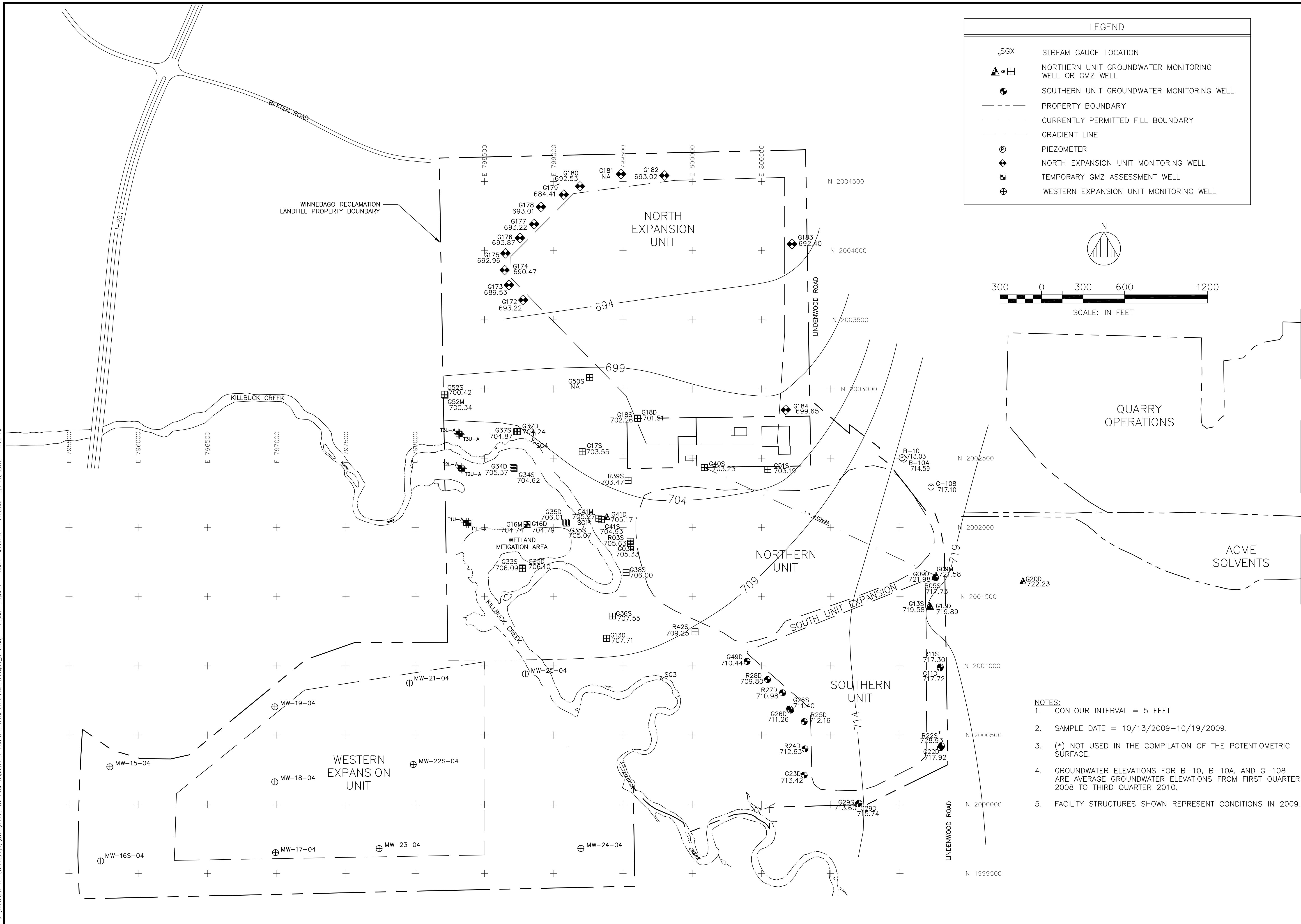
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2009

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER: B-11



REVISIONS
NO. | DATE | DESCRIPTION | BY

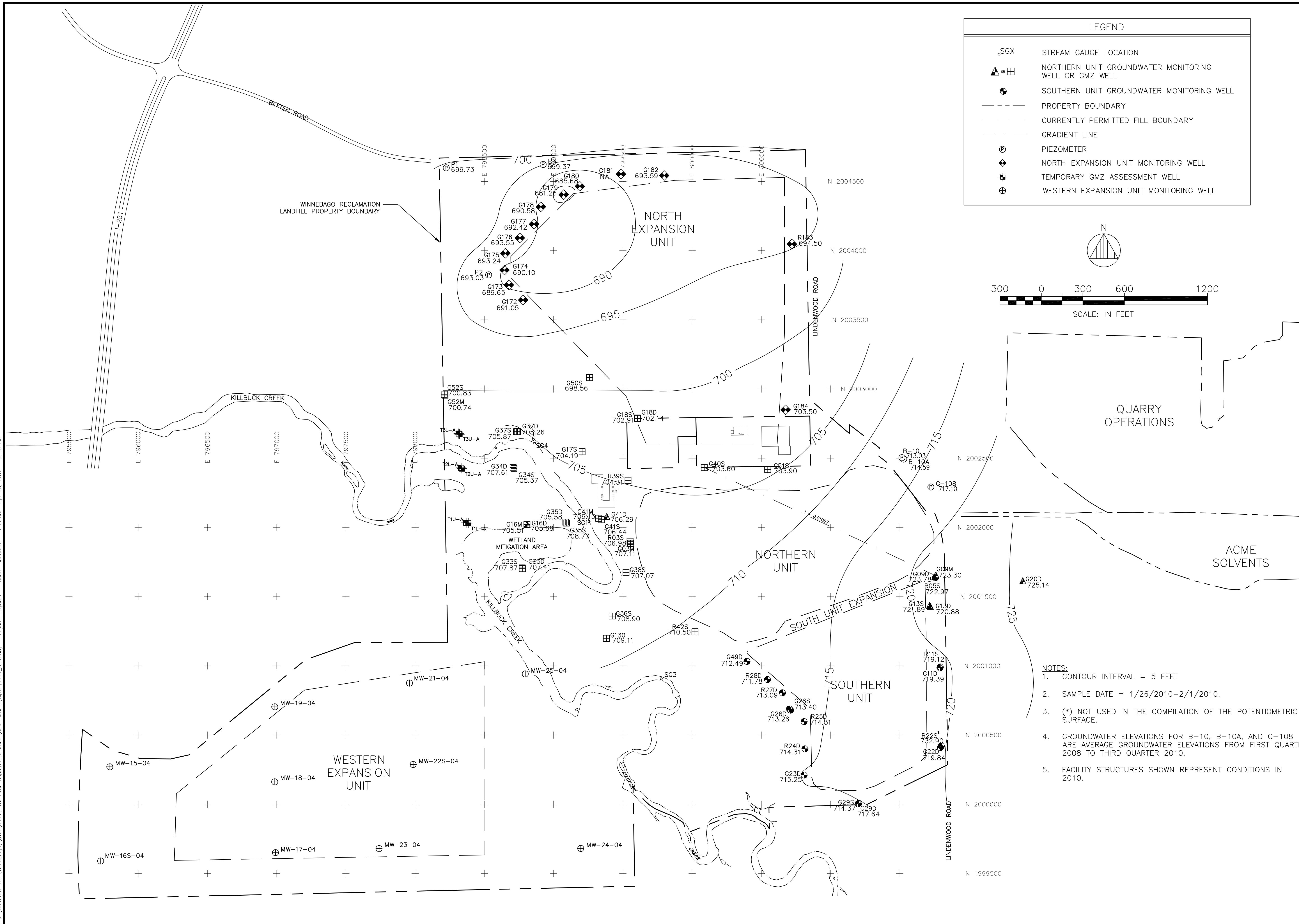
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2009

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKRORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-12



NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 1/26/2010–2/1/2010.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2010.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.

3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

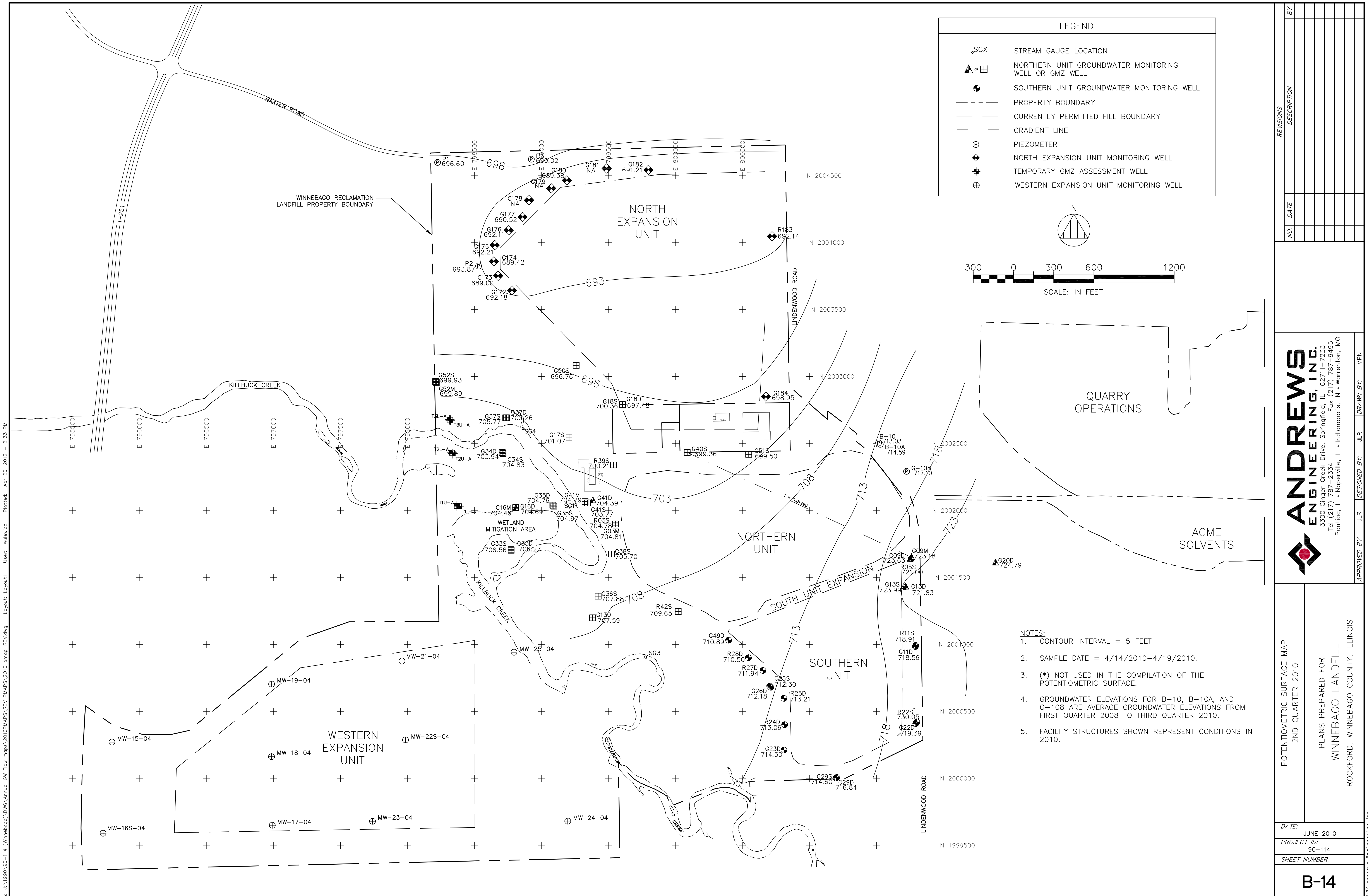
APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
1ST QUARTER 2010

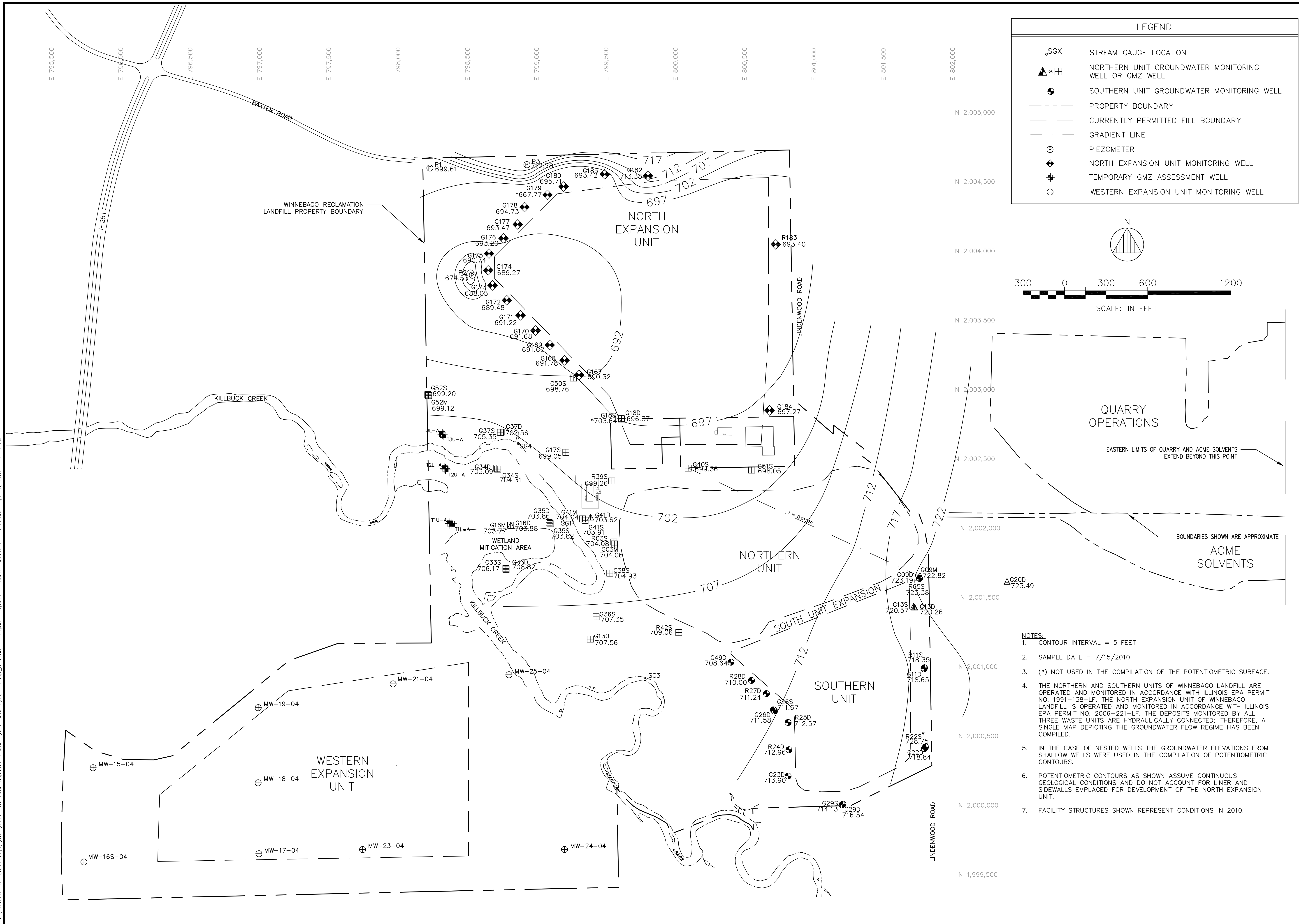
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: JUNE 2010
PROJECT ID: 90-114
SHEET NUMBER:

B-13



LEGEND
SGX STREAM GAUGE LOCATION
NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
SOUTHERN UNIT GROUNDWATER MONITORING WELL
PROPERTY BOUNDARY
CURRENTLY PERMITTED FILL BOUNDARY
GRADIENT LINE
PIEZOMETER
NORTH EXPANSION UNIT MONITORING WELL
TEMPORARY GMZ ASSESSMENT WELL
WESTERN EXPANSION UNIT MONITORING WELL
N
300 0 300 600 1200
SCALE: IN FEET
NORTH EXPANSION UNIT
NORTHERN UNIT
SOUTHERN UNIT
WESTERN EXPANSION UNIT
QUARRY OPERATIONS
ACME SOLVENTS
WETLAND MITIGATION AREA
WINNEBAGO RECLAMATION LANDFILL PROPERTY BOUNDARY
BAXTER ROAD
I-251
LINDENWOOD ROAD
KILLBUCK CREEK
SOUTH UNIT EXPANSION
698
693
703
708
713
718
723
NOTES:
1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 4/14/2010–4/19/2010.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2010.
REVISIONS
NO. DATE DESCRIPTION BY
ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
APPROVED BY: JLR
DESIGNED BY: JLR
DRAWN BY: MPN
POTENTIOMETRIC SURFACE MAP
2ND QUARTER 2010
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS
DATE: JUNE 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-14
© 2010 Andrews Engineering, Inc.



NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 7/15/2010.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991–138–LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006–221–LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
5. IN THE CASE OF NESTED WELLS THE GROUNDWATER ELEVATIONS FROM SHALLOW WELLS WERE USED IN THE COMPILATION OF POTENTIOMETRIC CONTOURS.
6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2010.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

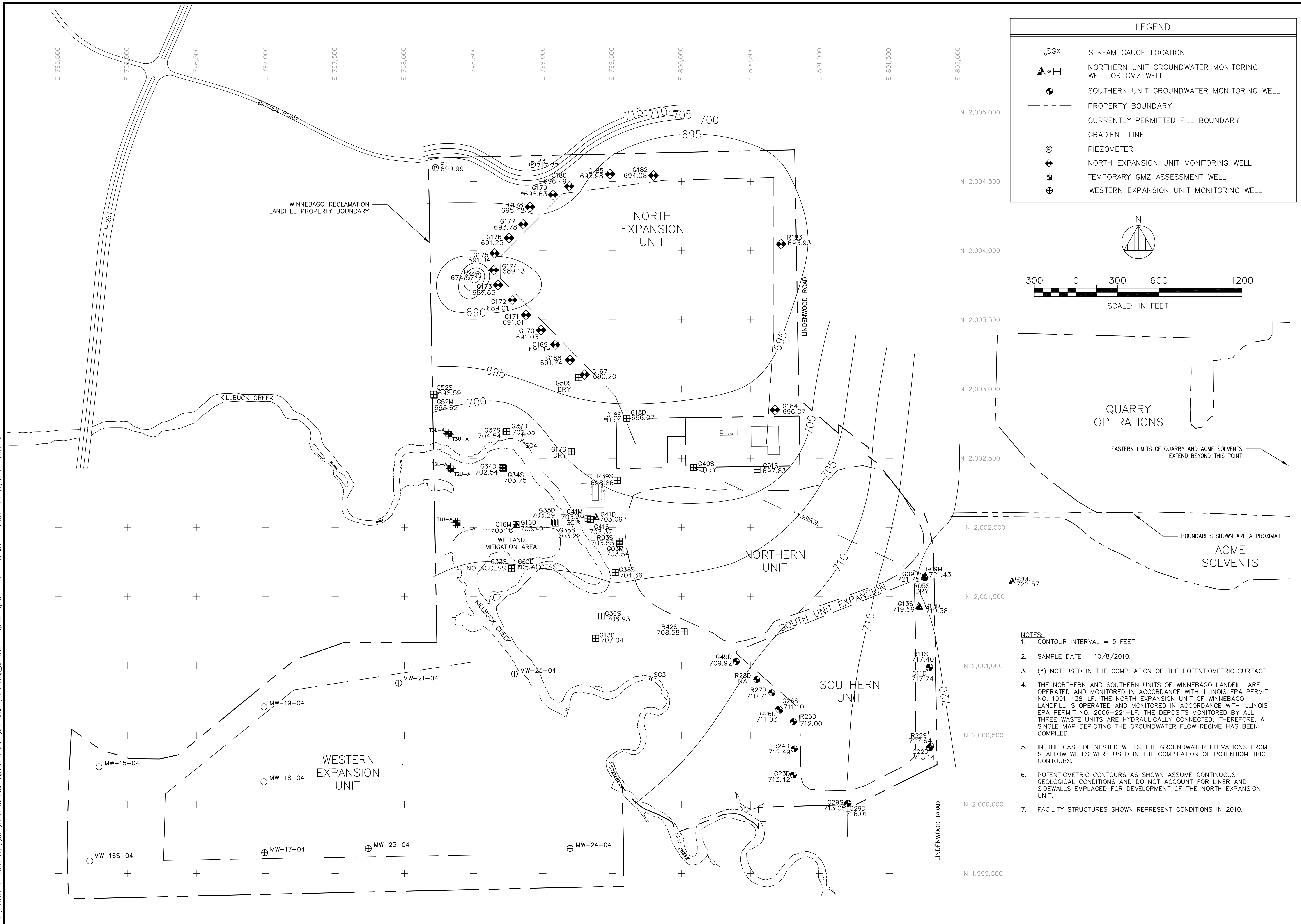
APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2010

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: SEPTEMBER 2010
PROJECT ID: 90–114
SHEET NUMBER:

B-15



NOTES:
1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATE = 10/8/2010.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991-138-LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006-221-LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
5. IN THE CASE OF NESTED WELLS THE GROUNDWATER ELEVATIONS FROM SHALLOW WELLS WERE USED IN THE COMPILATION OF POTENTIOMETRIC CONTOURS.
6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2010.

NO.	DATE	REVISIONS DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2010

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: DECEMBER 2010
PROJECT ID: 90-114
SHEET NUMBER:
B-16

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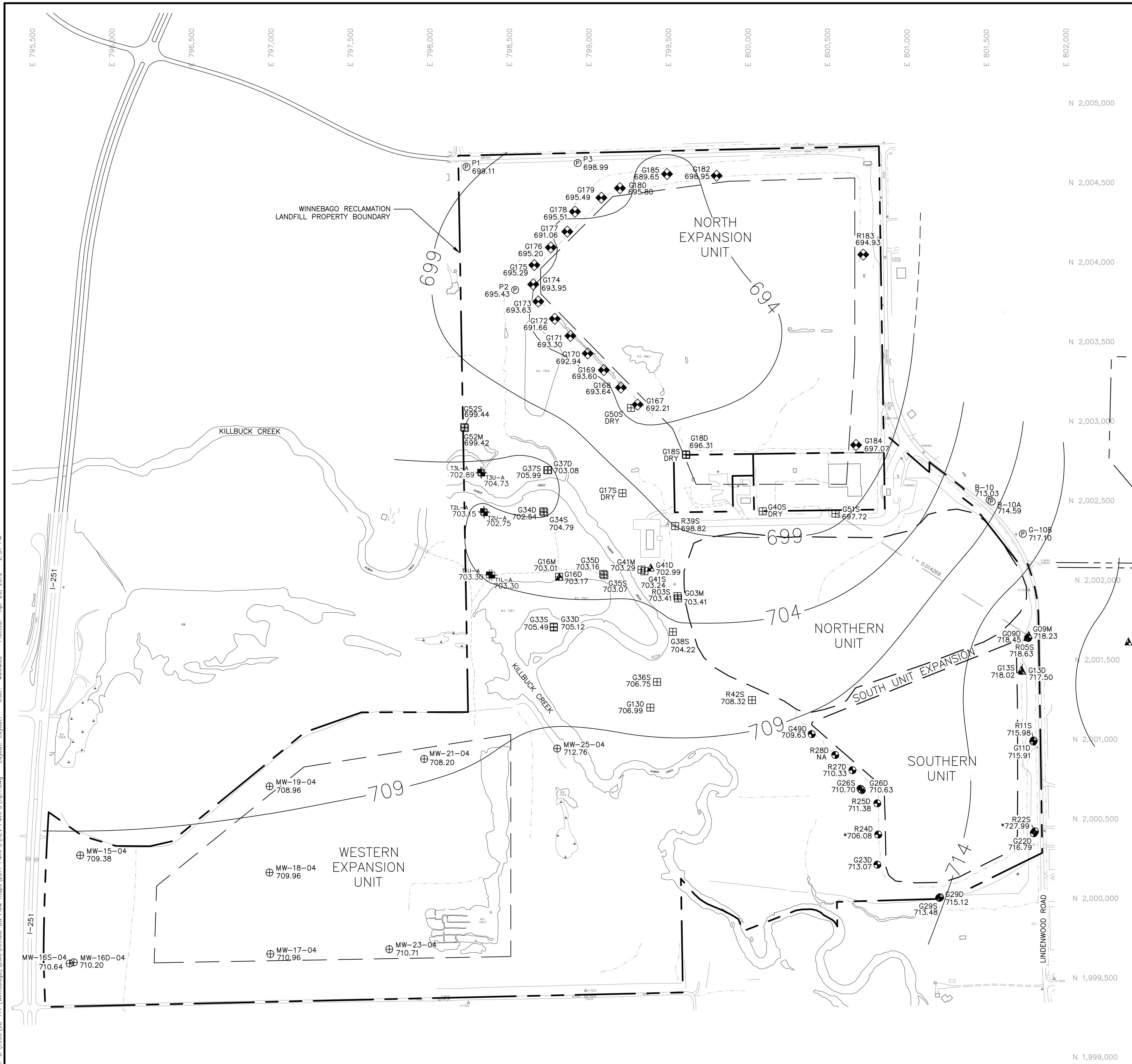

LEGEND

SGX	STREAM GAUGE LOCATION
	NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
	SOUTHERN UNIT GROUNDWATER MONITORING WELL
	PROPERTY BOUNDARY
	CURRENTLY PERMITTED FILL BOUNDARY
	GRADIENT LINE
P	PIEZOMETER
	NORTH EXPANSION UNIT MONITORING WELL
	TEMPORARY GMZ ASSESSMENT WELL
	WESTERN EXPANSION UNIT MONITORING WELL

NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 1/17/2011 – 1/20/2011.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. GROUNDWATER ELEVATIONS FOR B-10, B-10A, AND G-108 ARE AVERAGE GROUNDWATER ELEVATIONS FROM FIRST QUARTER 2008 TO THIRD QUARTER 2010.
5. FACILITY STRUCURES SHOWN REPRESENT CONDITIONS IN 2011.

REVISIONS

NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
1ST QUARTER 2011

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: FEBRUARY 2011
PROJECT ID: 90-114
SHEET NUMBER:
B-17

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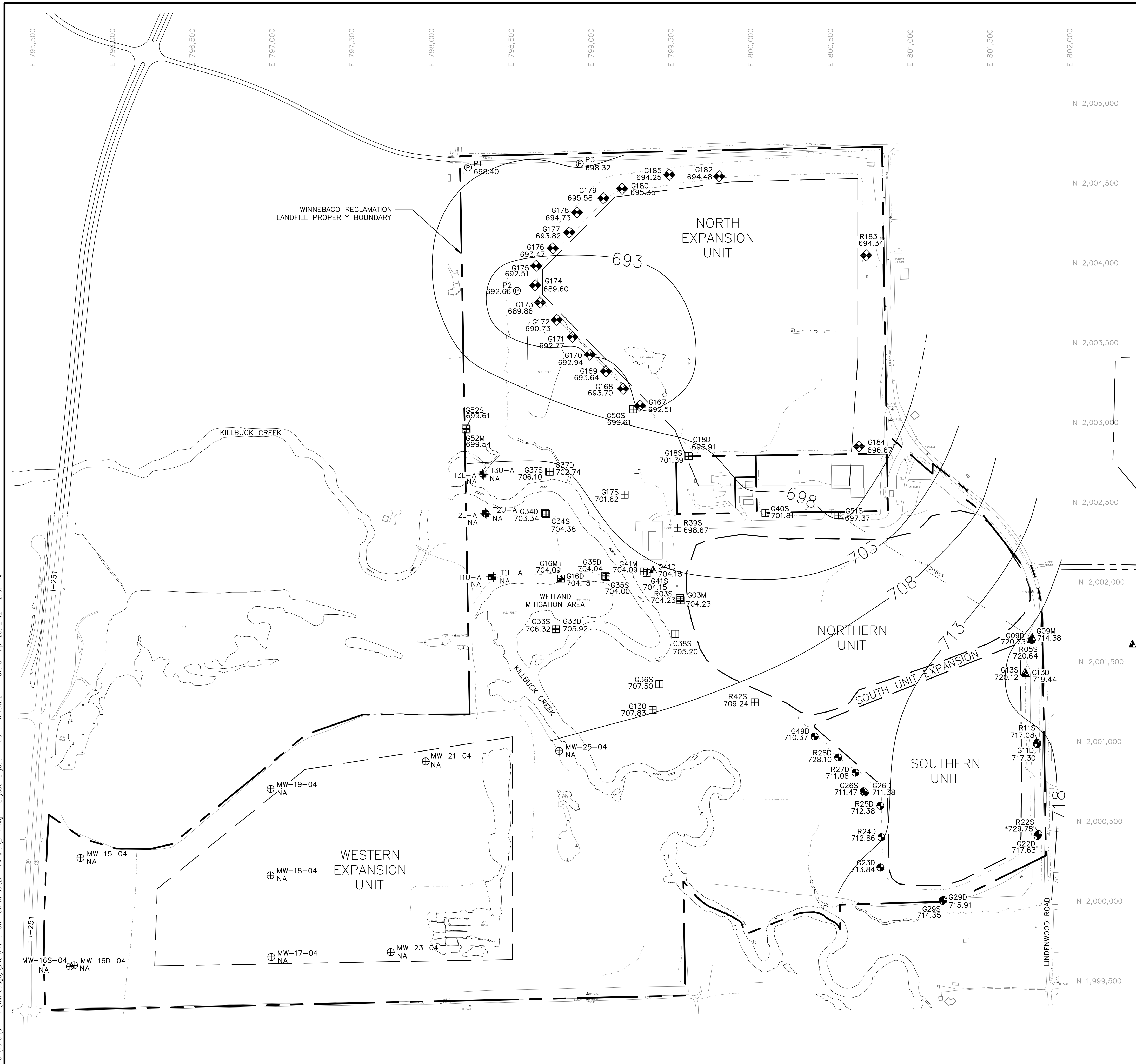

LEGEND

Symbol	Description
SGX	STREAM GAUGE LOCATION
▲ or ⊞	NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
	SOUTHERN UNIT GROUNDWATER MONITORING WELL
— - —	PROPERTY BOUNDARY
— —	CURRENTLY PERMITTED FILL BOUNDARY
——	GRADIENT LINE
Ⓟ	PIEZOMETER
	NORTH EXPANSION UNIT MONITORING WELL
	TEMPORARY GMZ ASSESSMENT WELL
⊕	WESTERN EXPANSION UNIT MONITORING WELL

NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 4/6/2011 – 4/8/2011.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991–138–LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006–221–LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
5. IN THE CASE OF NESTED WELLS THE GROUNDWATER ELEVATIONS FROM SHALLOW WELLS WERE USED IN THE COMPILATION OF POTENTIOMETRIC CONTOURS.
6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2011.

NO.	DATE	REVISIONS DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
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Tel (217) 787–2334 Fax (217) 787–9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

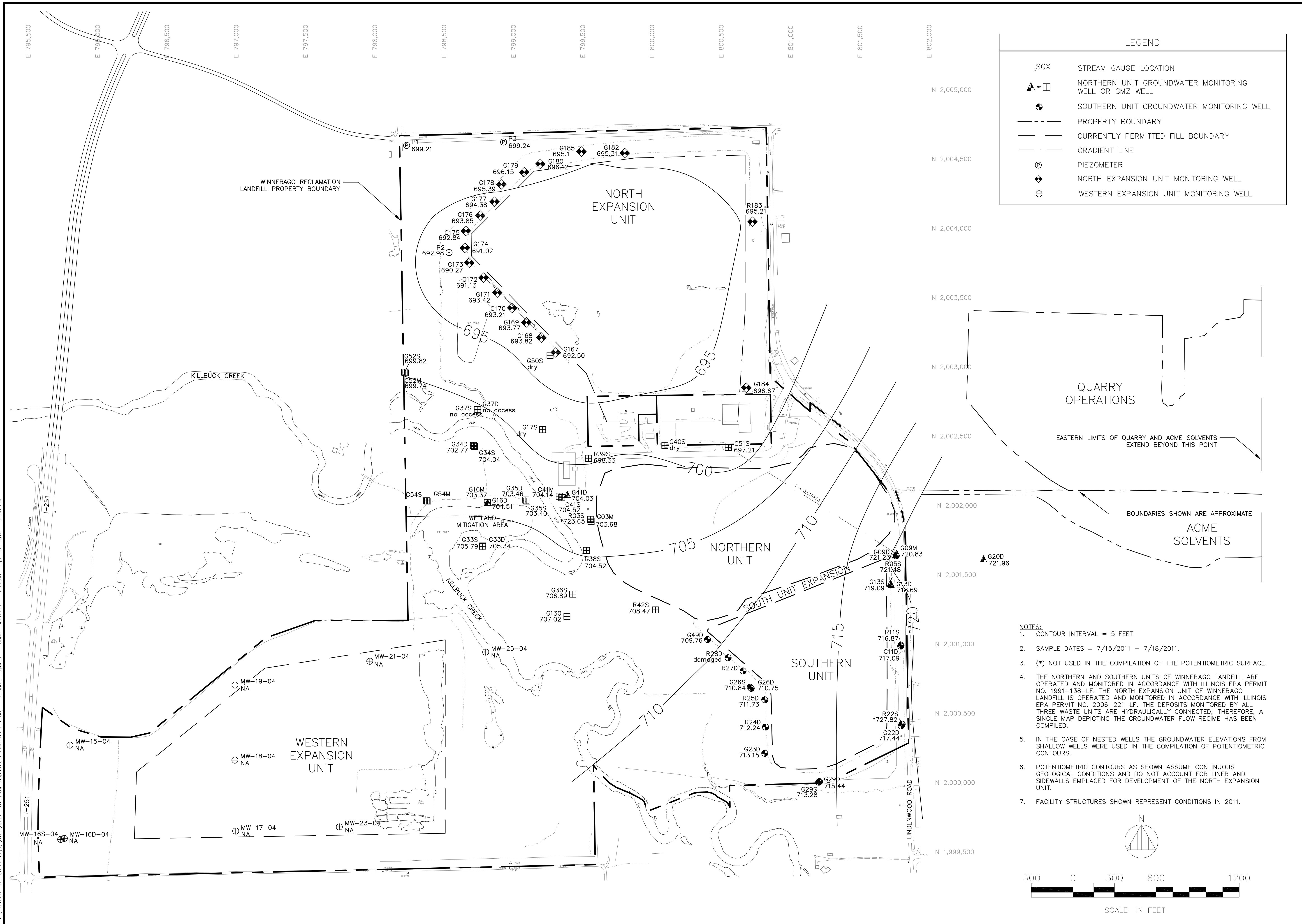
APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
2ND QUARTER 2011

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: JULY 2011
PROJECT ID: 90–114
SHEET NUMBER:

B-18



LEGEND

Symbol	Description
SGX	STREAM GAUGE LOCATION
	NORTHERN UNIT GROUNDWATER MONITORING WELL OR GMZ WELL
	SOUTHERN UNIT GROUNDWATER MONITORING WELL
	PROPERTY BOUNDARY
	CURRENTLY PERMITTED FILL BOUNDARY
	GRADIENT LINE
	PIEZOMETER
	NORTH EXPANSION UNIT MONITORING WELL
	WESTERN EXPANSION UNIT MONITORING WELL

NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 7/15/2011 – 7/18/2011.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991–138–LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006–221–LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
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6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2011.

REVISIONS: NO. | DATE | DESCRIPTION | BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

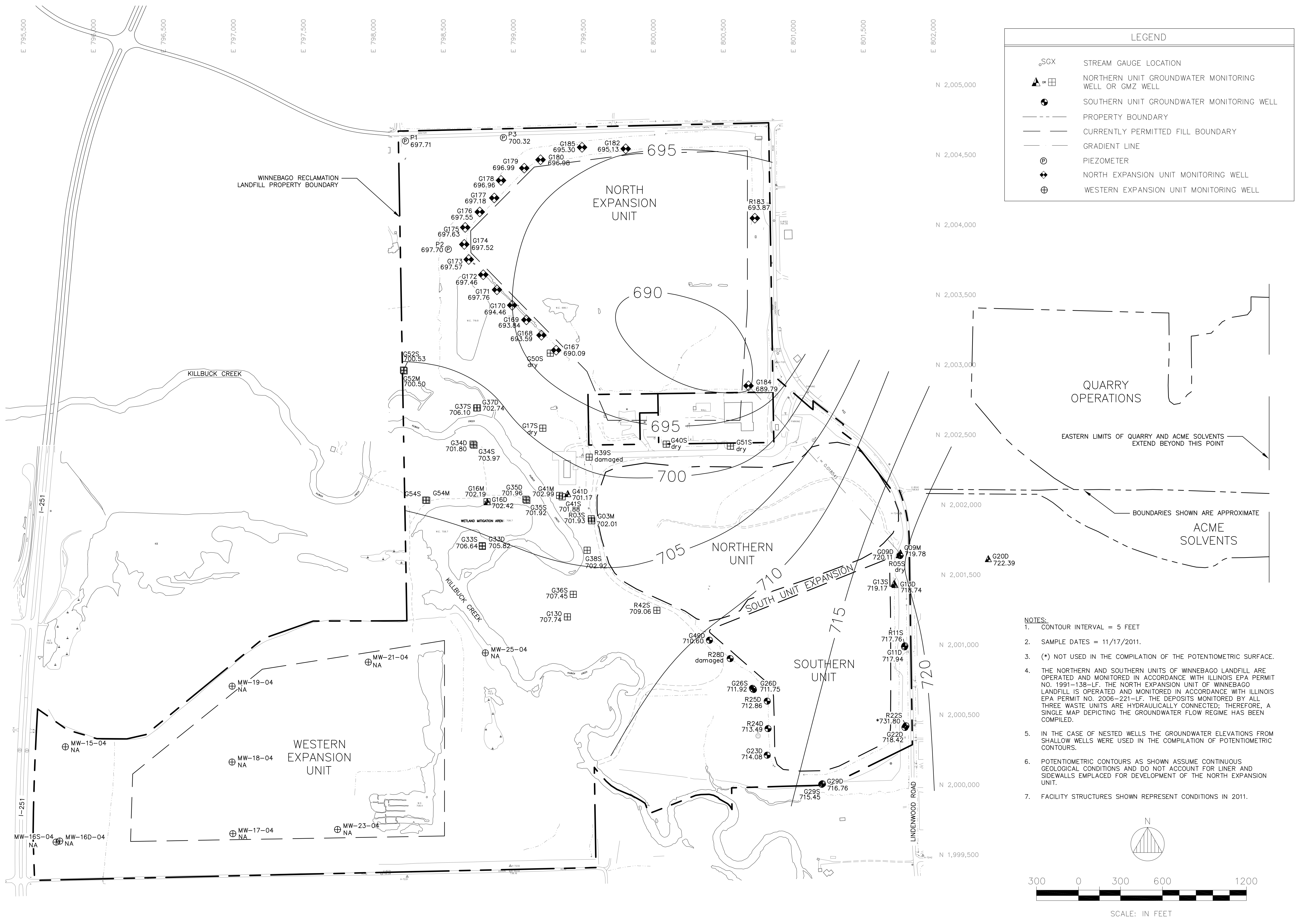
APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2011

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: JULY 2011
PROJECT ID: 90-114
SHEET NUMBER:

B-19



NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 11/17/2011.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991-138-LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006-221-LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
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7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2011.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2011

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: January 2012
PROJECT ID: 90-114
SHEET NUMBER:
B-20

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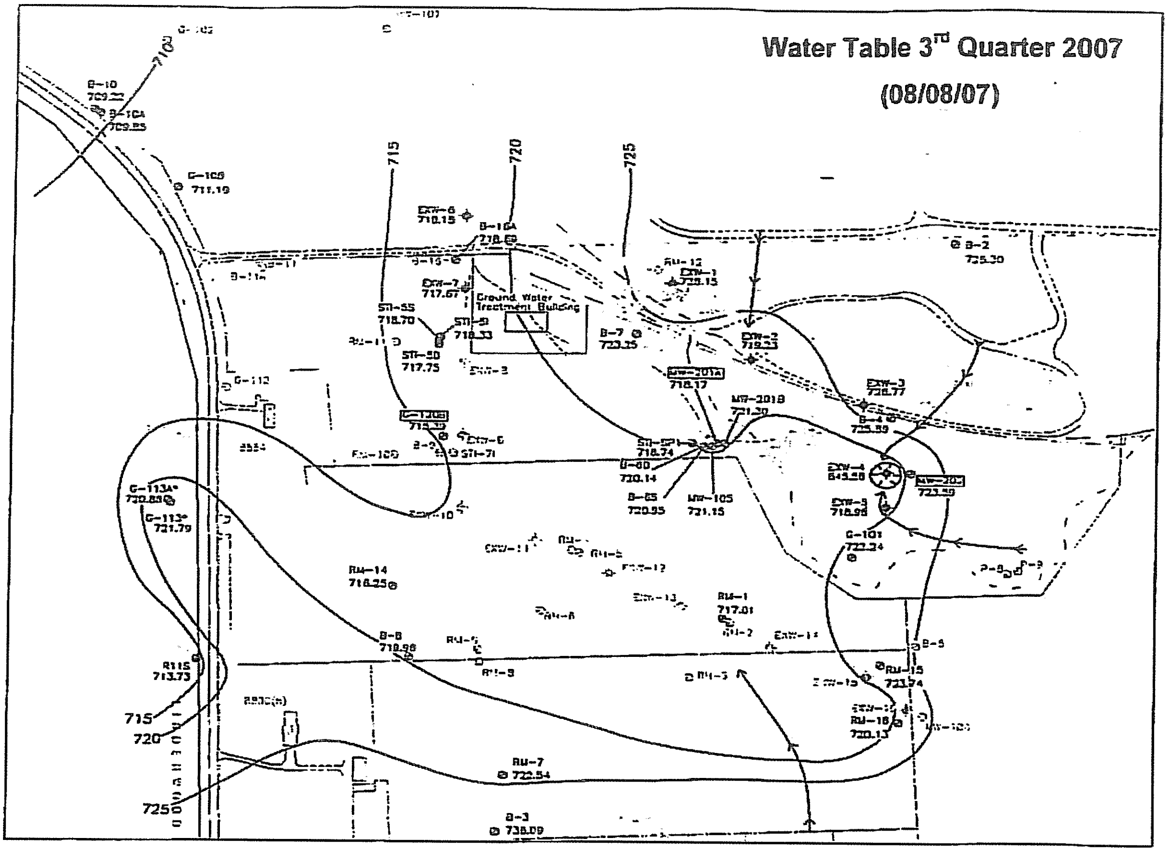
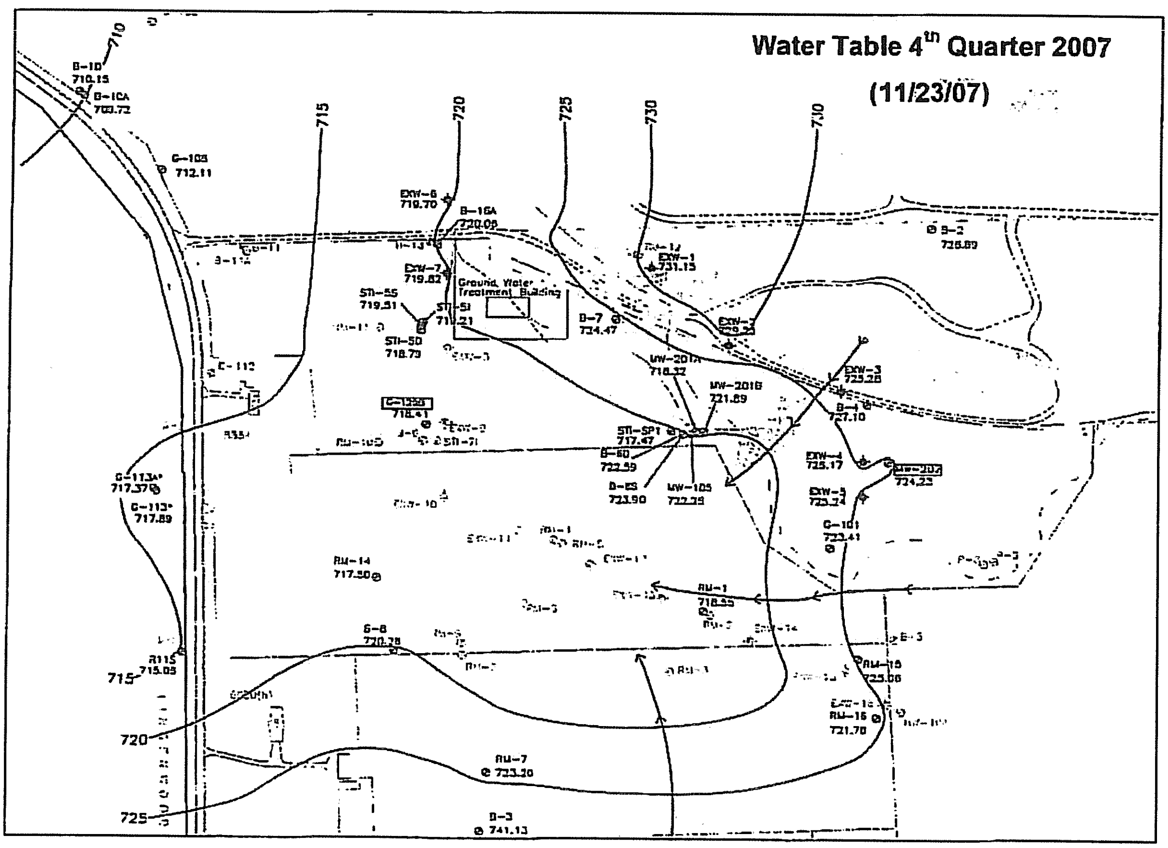
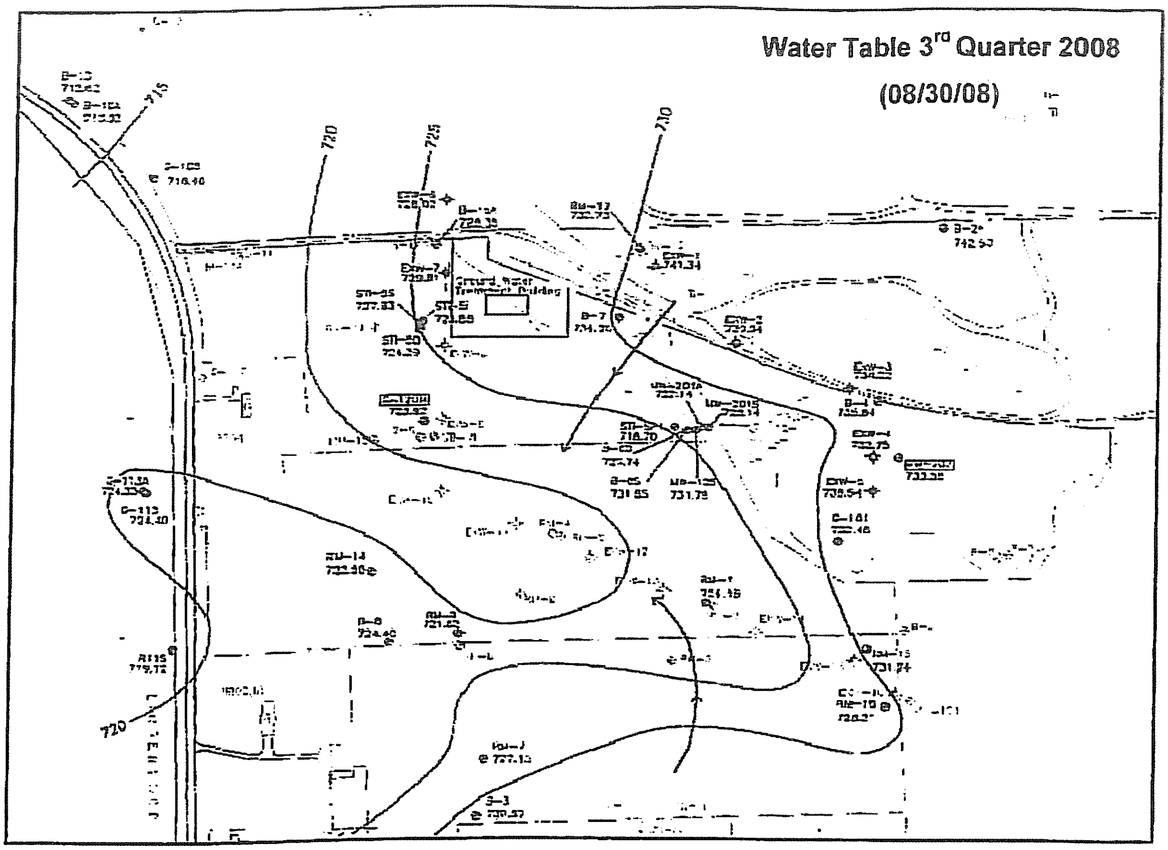
APPENDIX C

Acme Solvent Site Potentiometric Surface Maps

Figure 1: Acme Solvents Site Water Table Maps






Water Table 3rd Quarter 2008
(08/30/08)
715
720
725
730
720

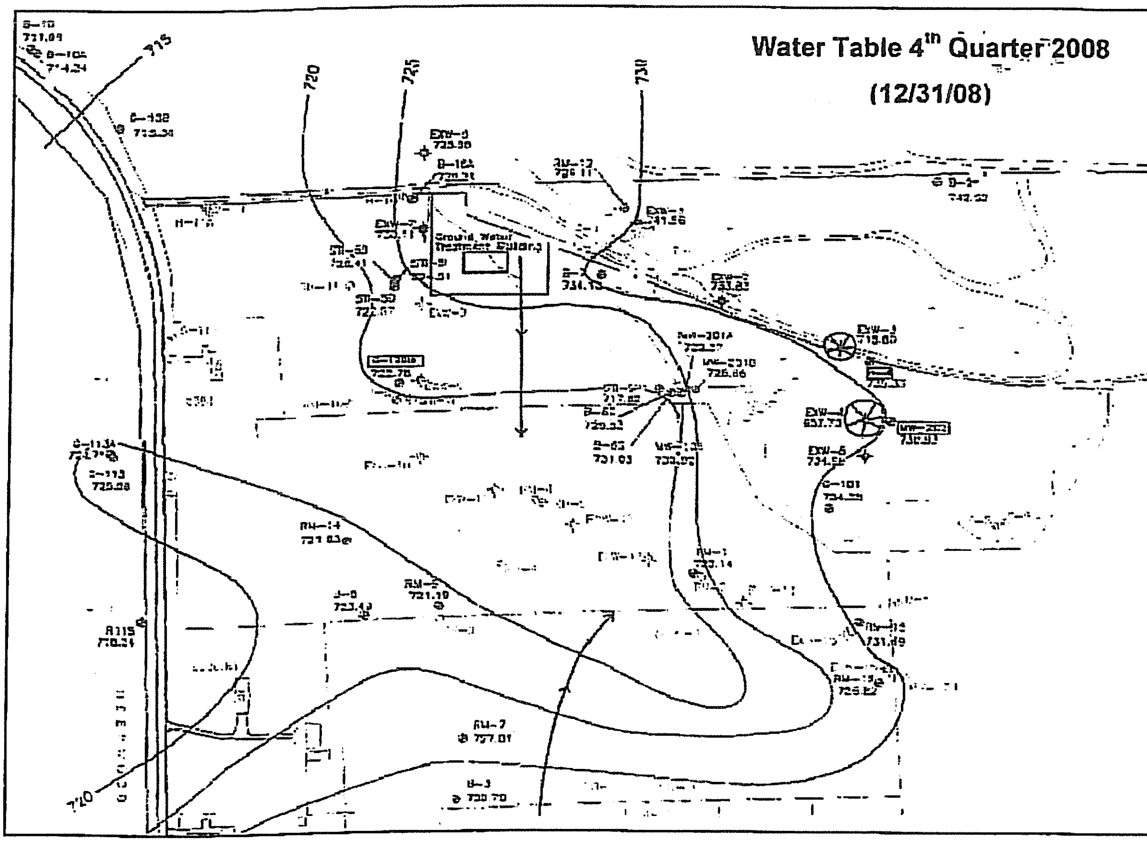
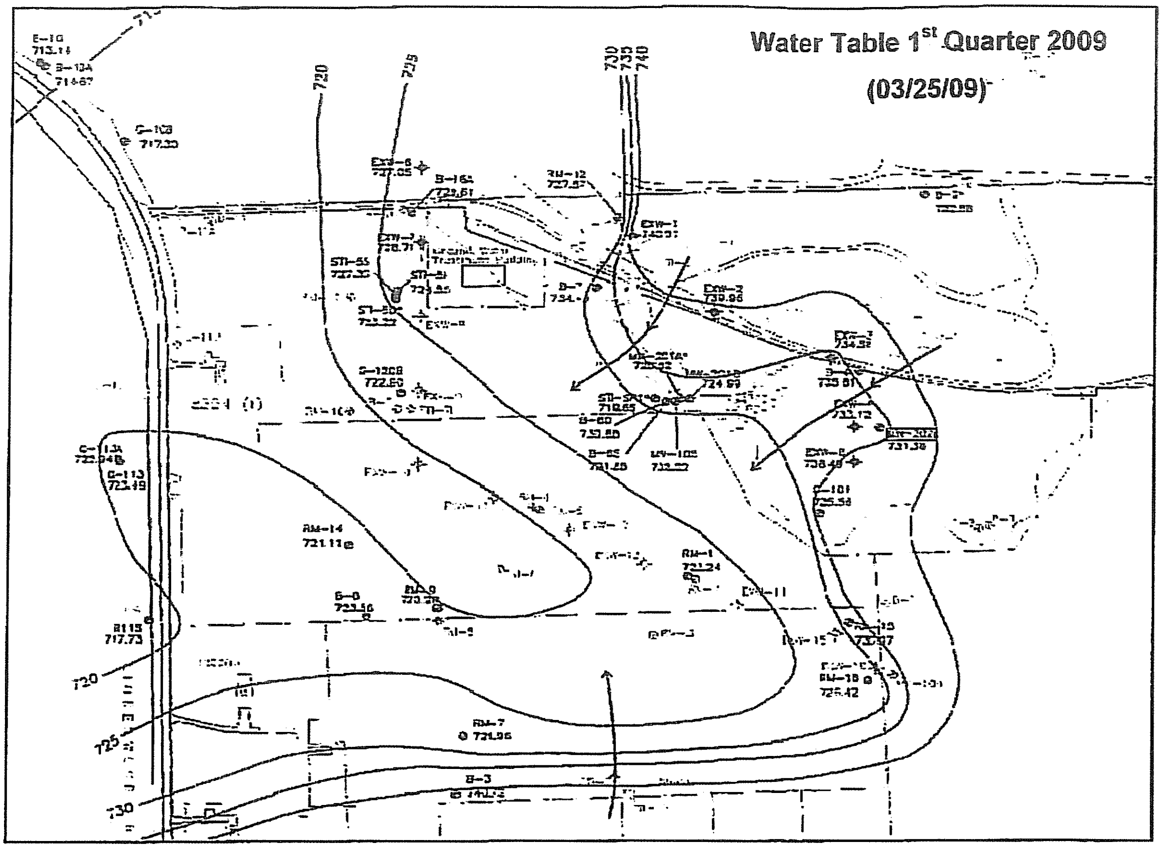

Water Table 4th Quarter 2008
(12/31/08)
715
720
725
730
720

Figure 1: Acme Solvents Site Water Table Maps (cont.)



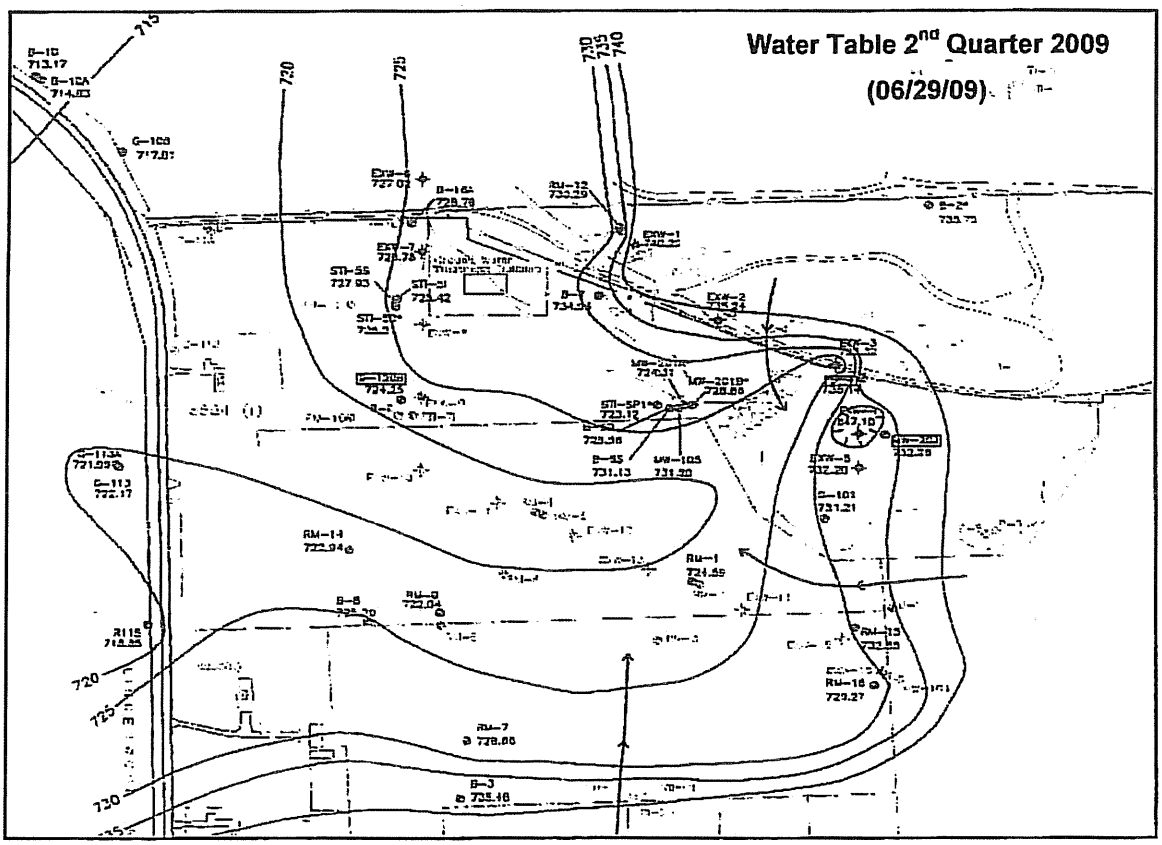
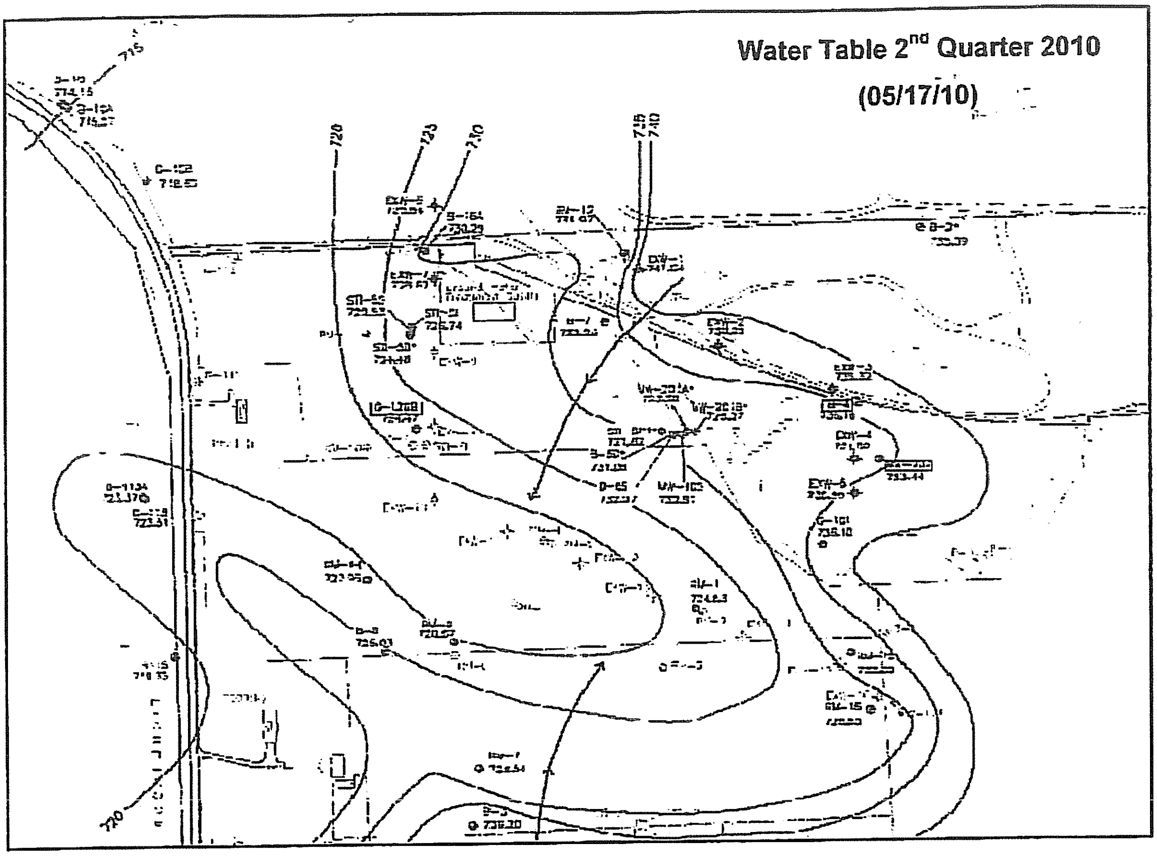
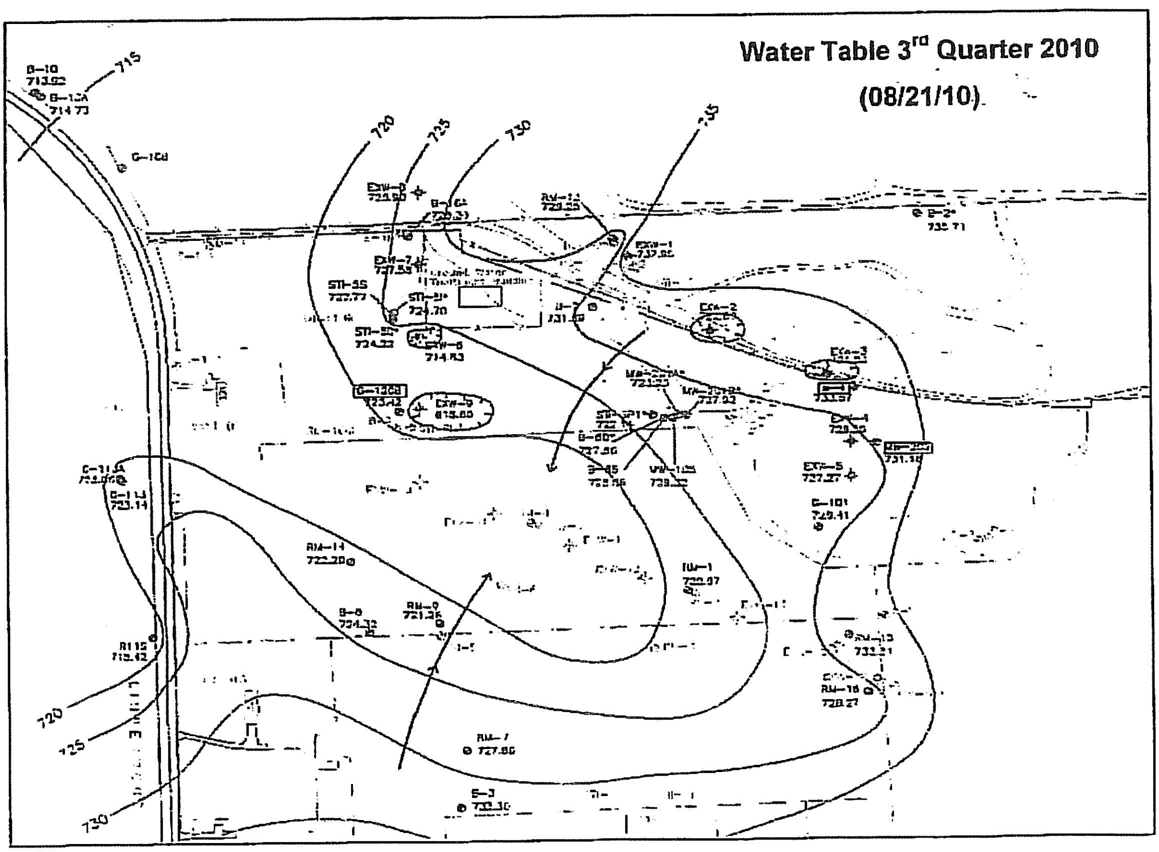


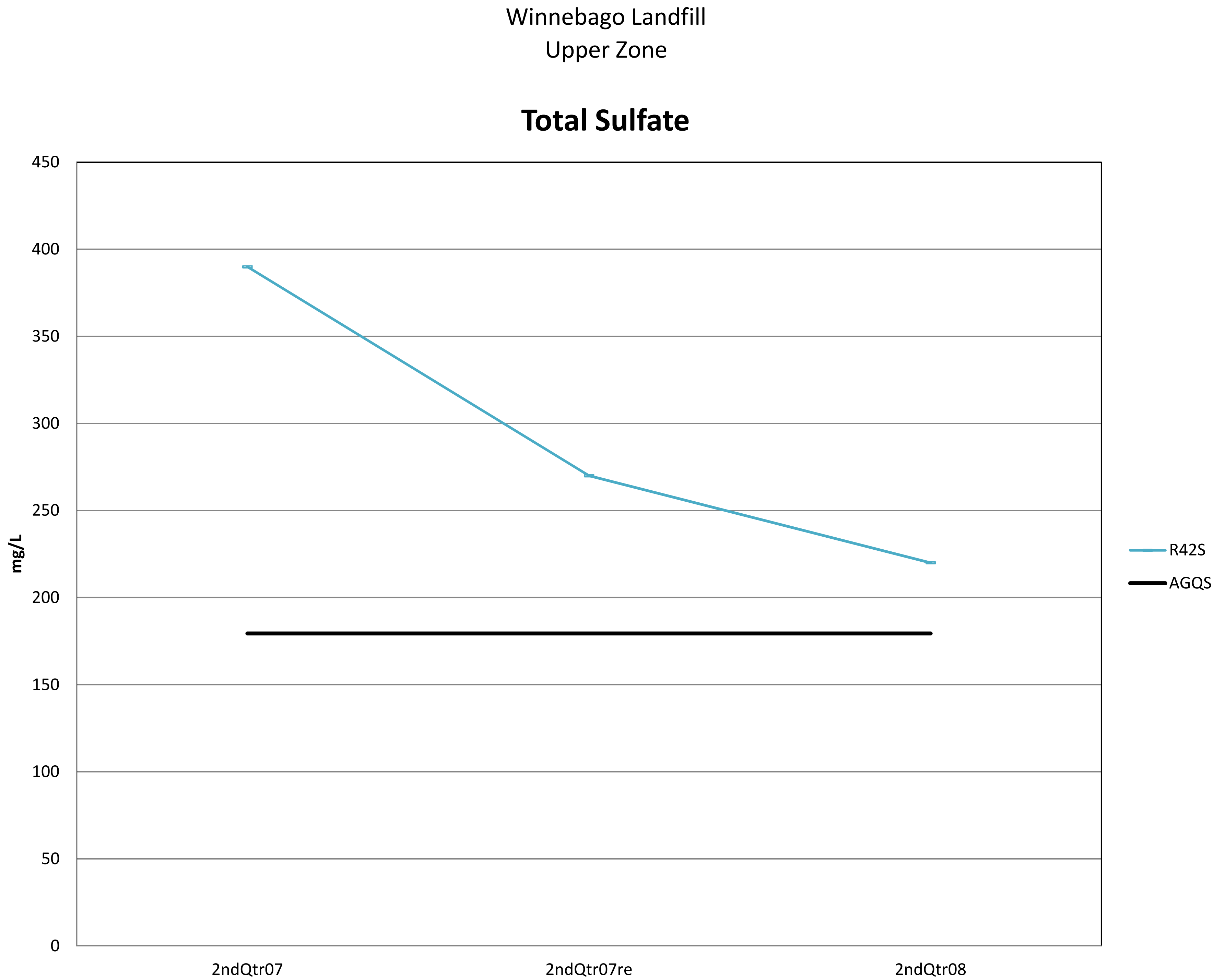
Figure 1: Acme Solvents Site Water Table Maps (cont.)



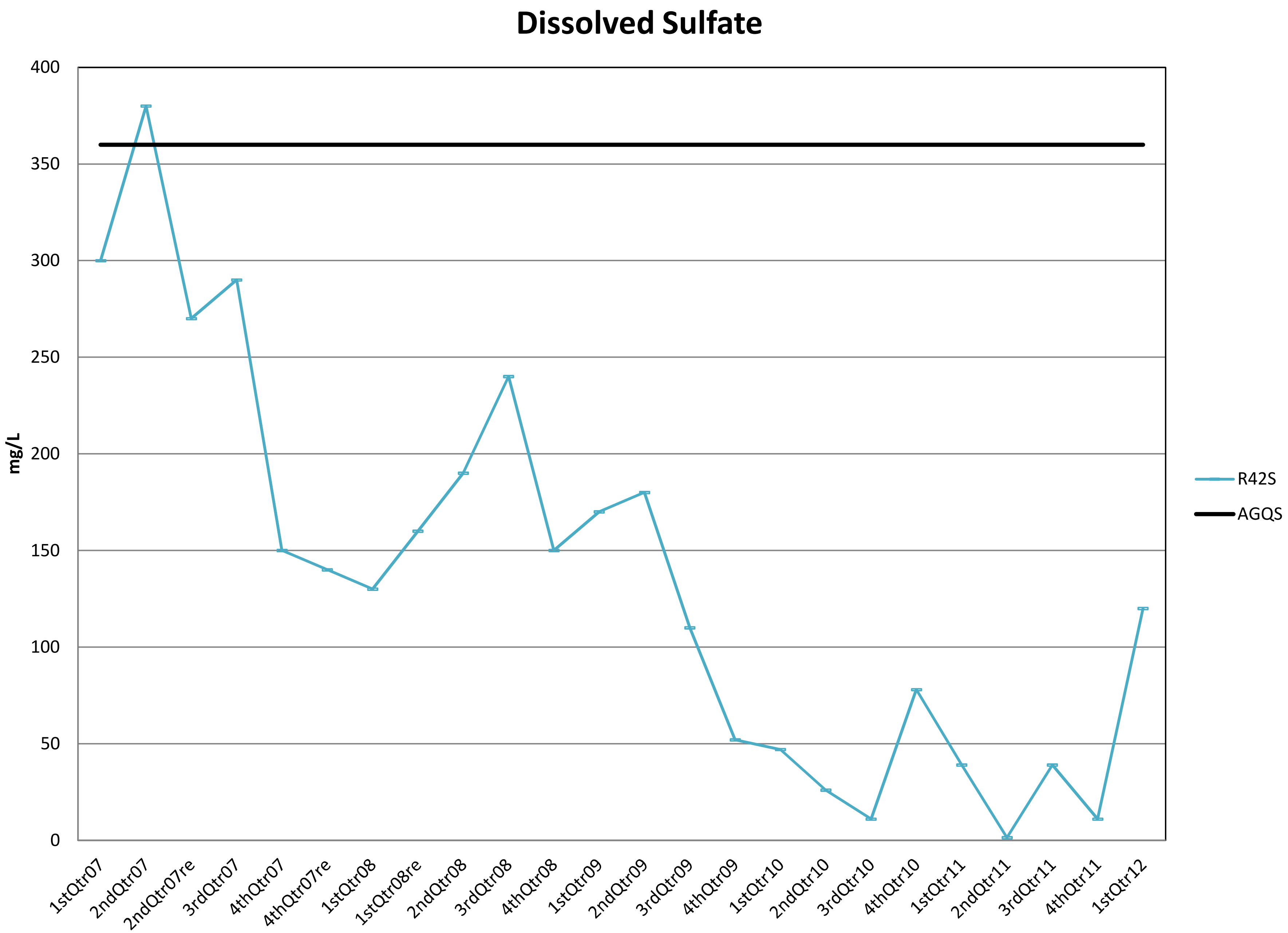


APPENDIX D

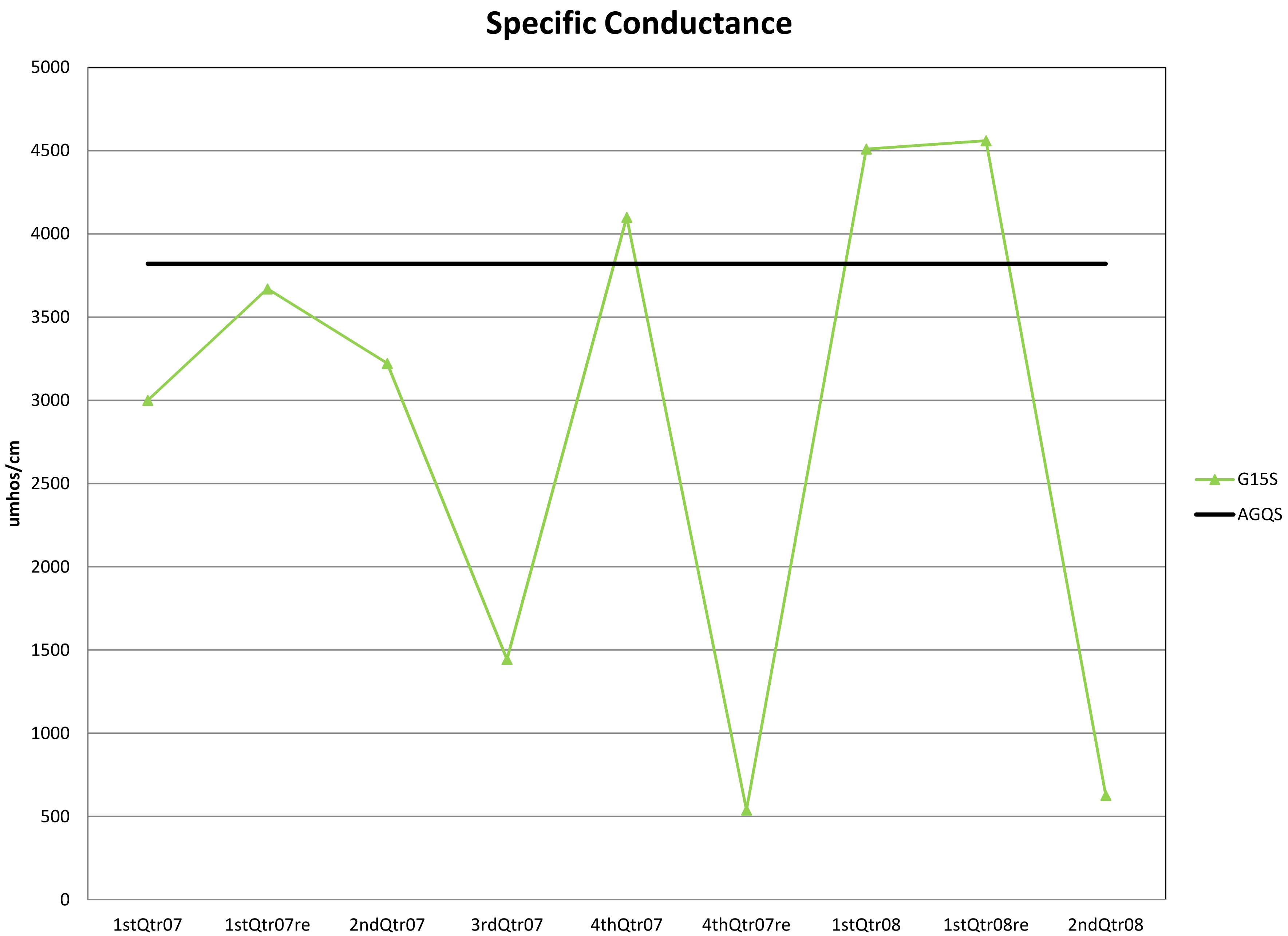
Upper Zone Trend Graphs


Winnebago Landfill
Upper Zone
Total Sulfate
450
400
350
300
250
200
150
100
50
0
mg/L
2ndQtr07
2ndQtr07re
2ndQtr08
R42S
AGQS

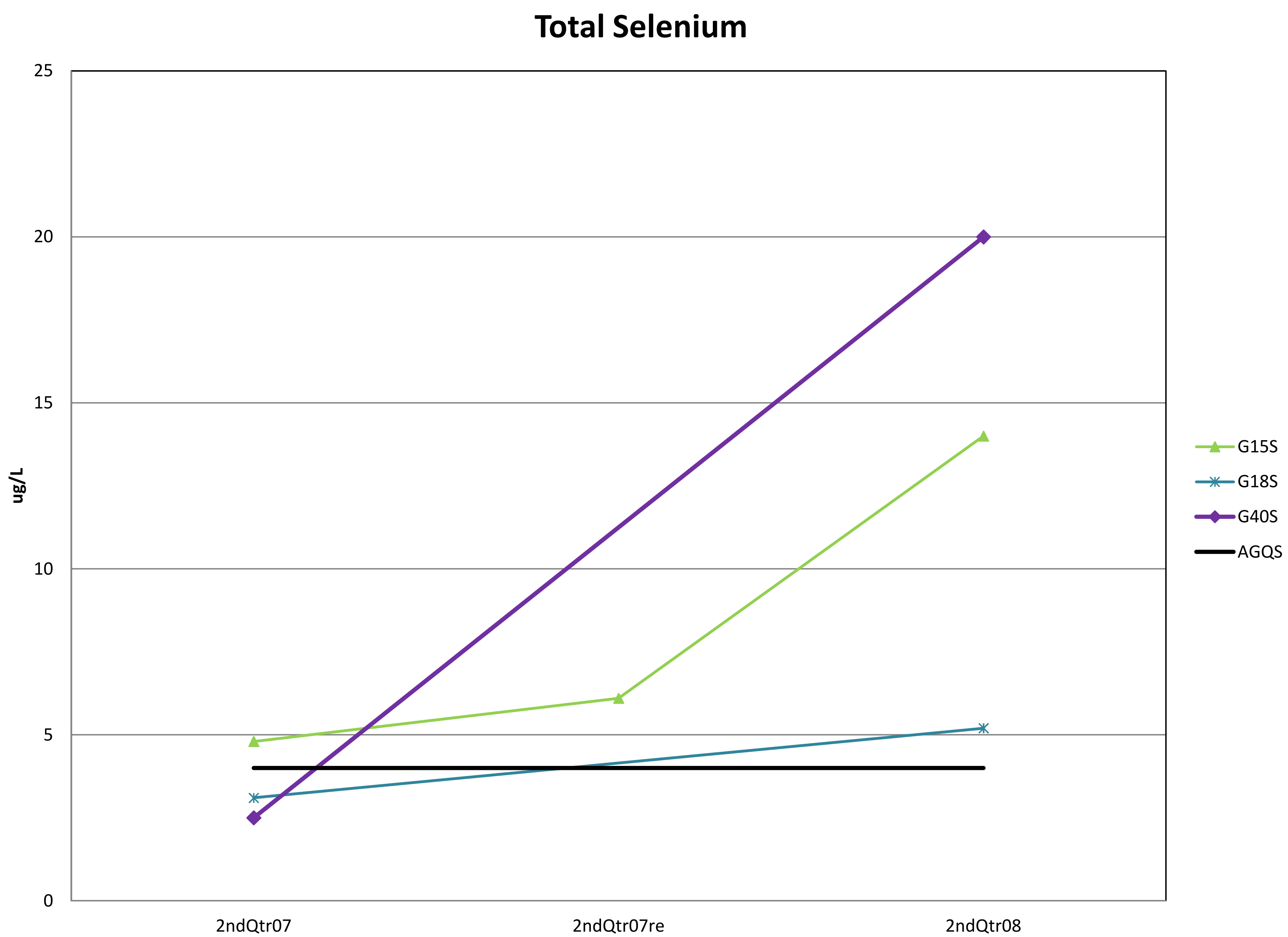
Winnebago Landfill
Upper Zone



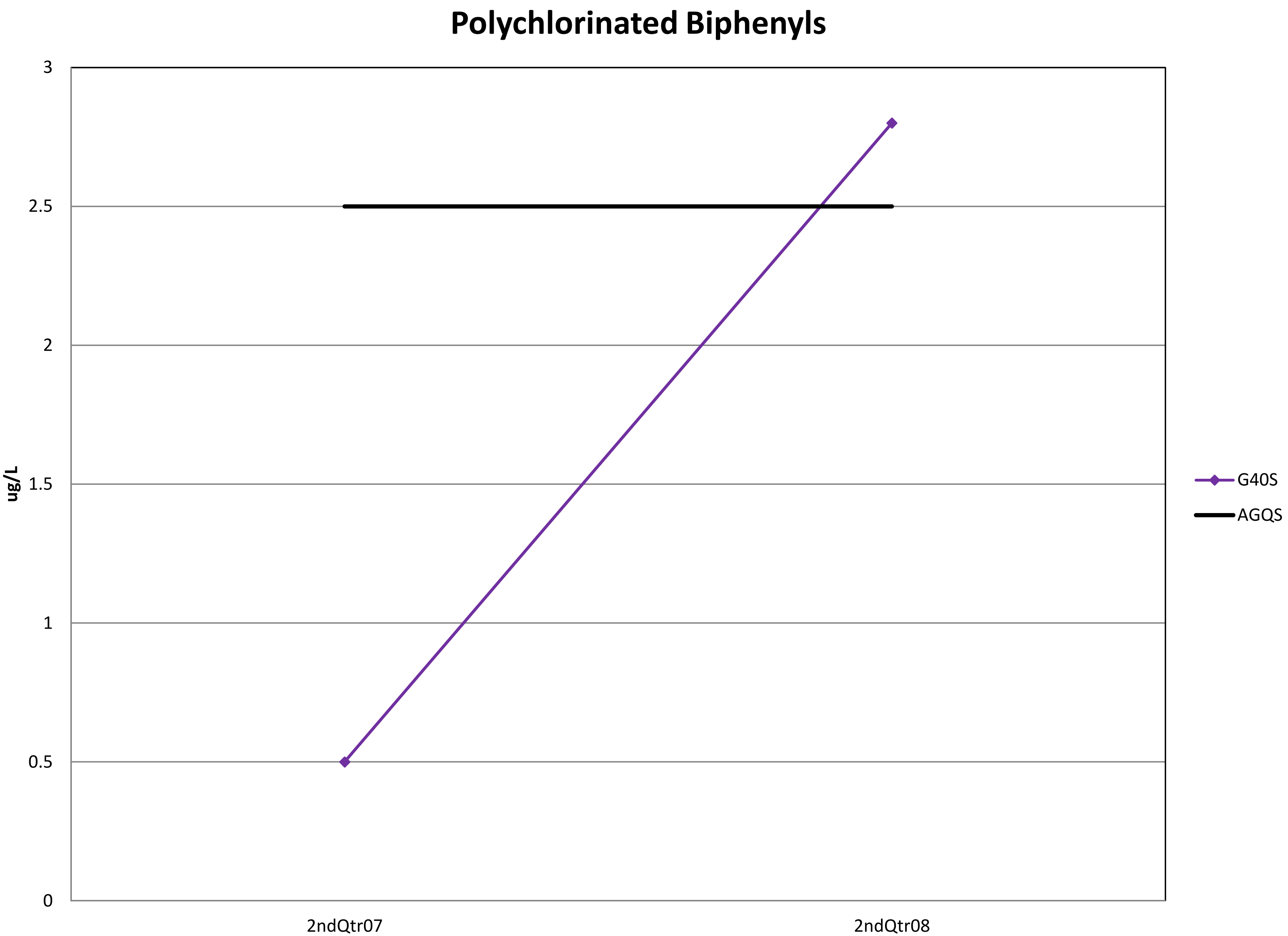
Winnebago Landfill
Upper Zone



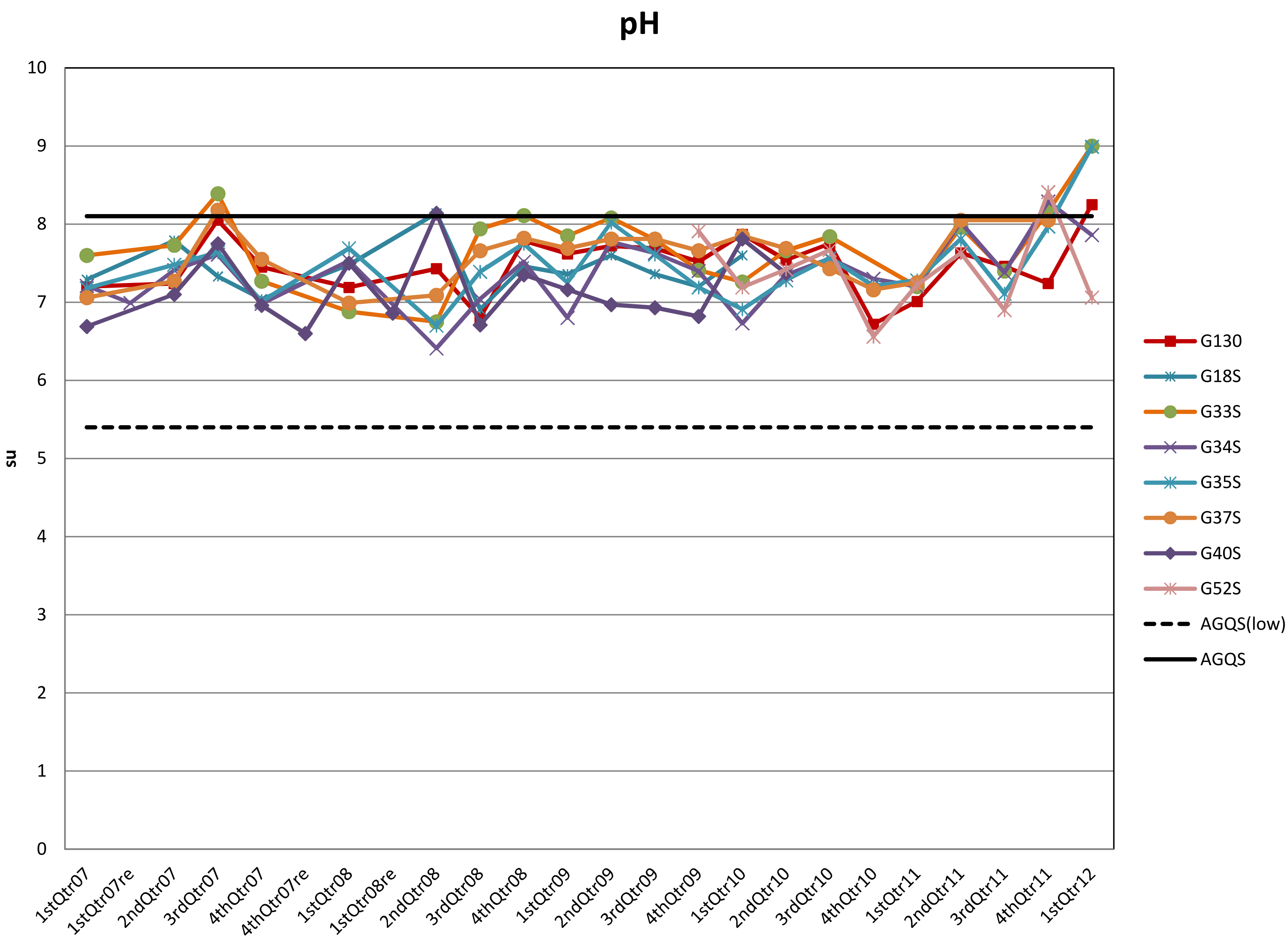
Winnebago Landfill
Upper Zone



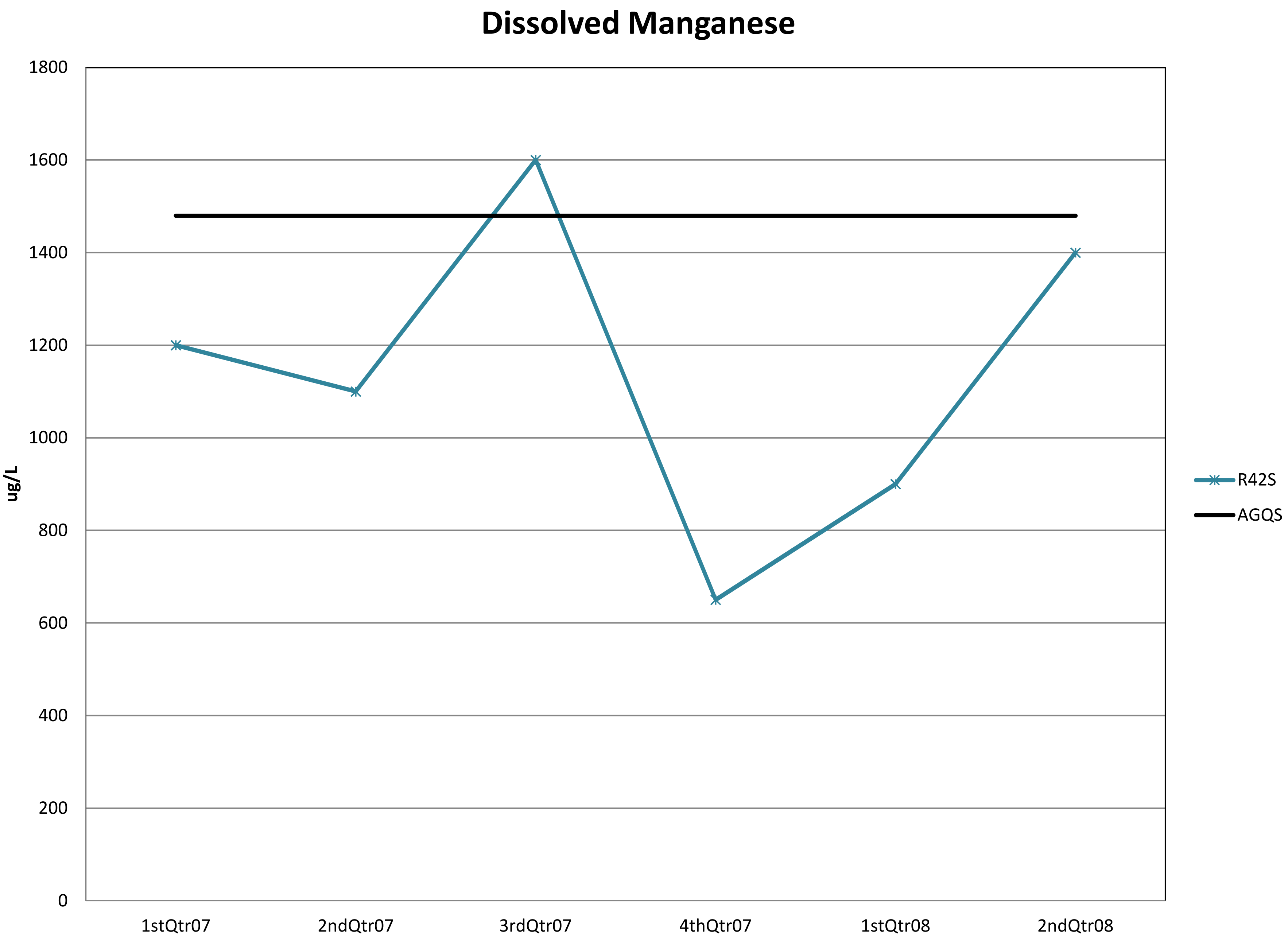
Winnebago Landfill
Upper Zone



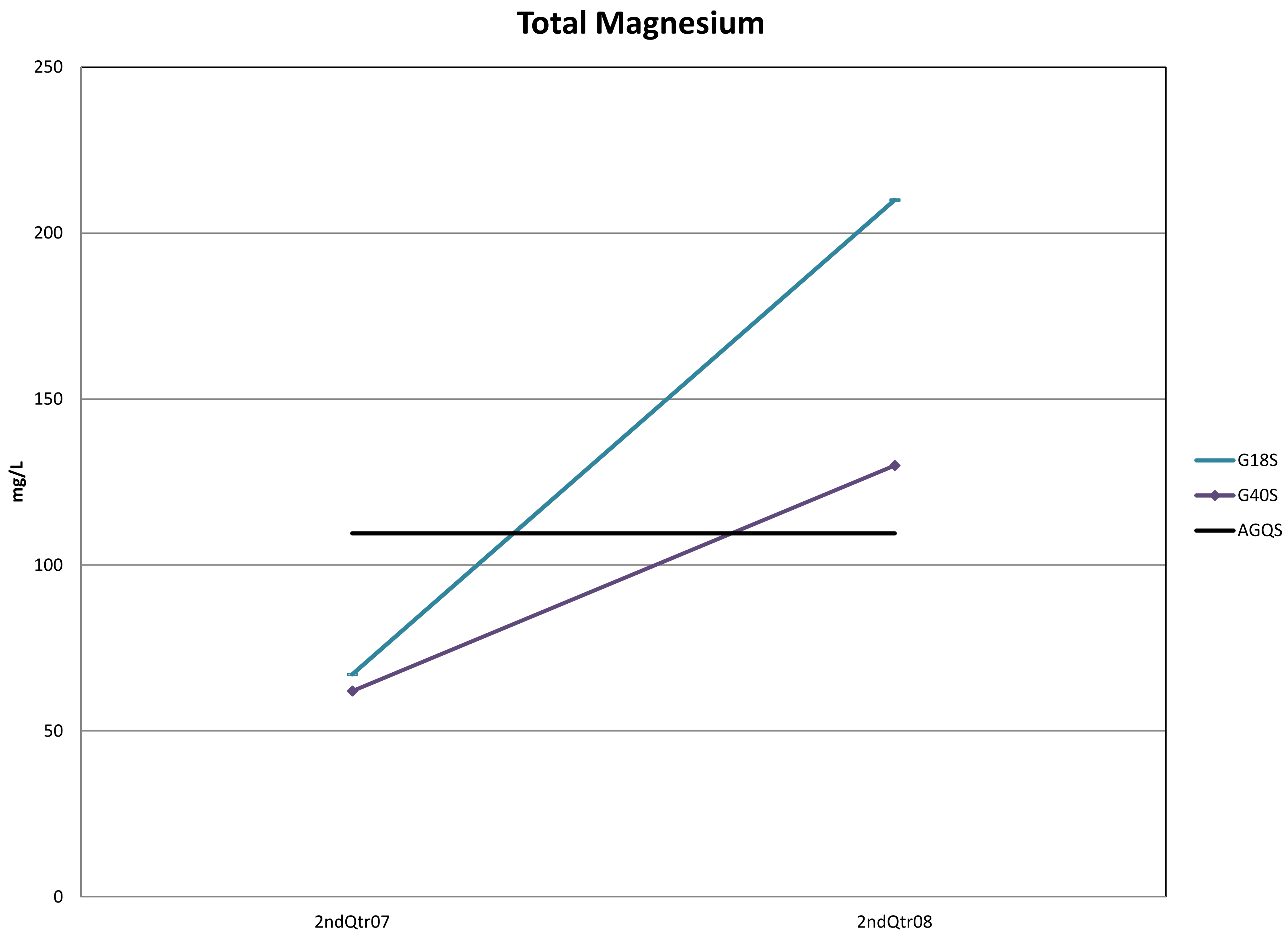
Winnebago Landfill
Upper Zone



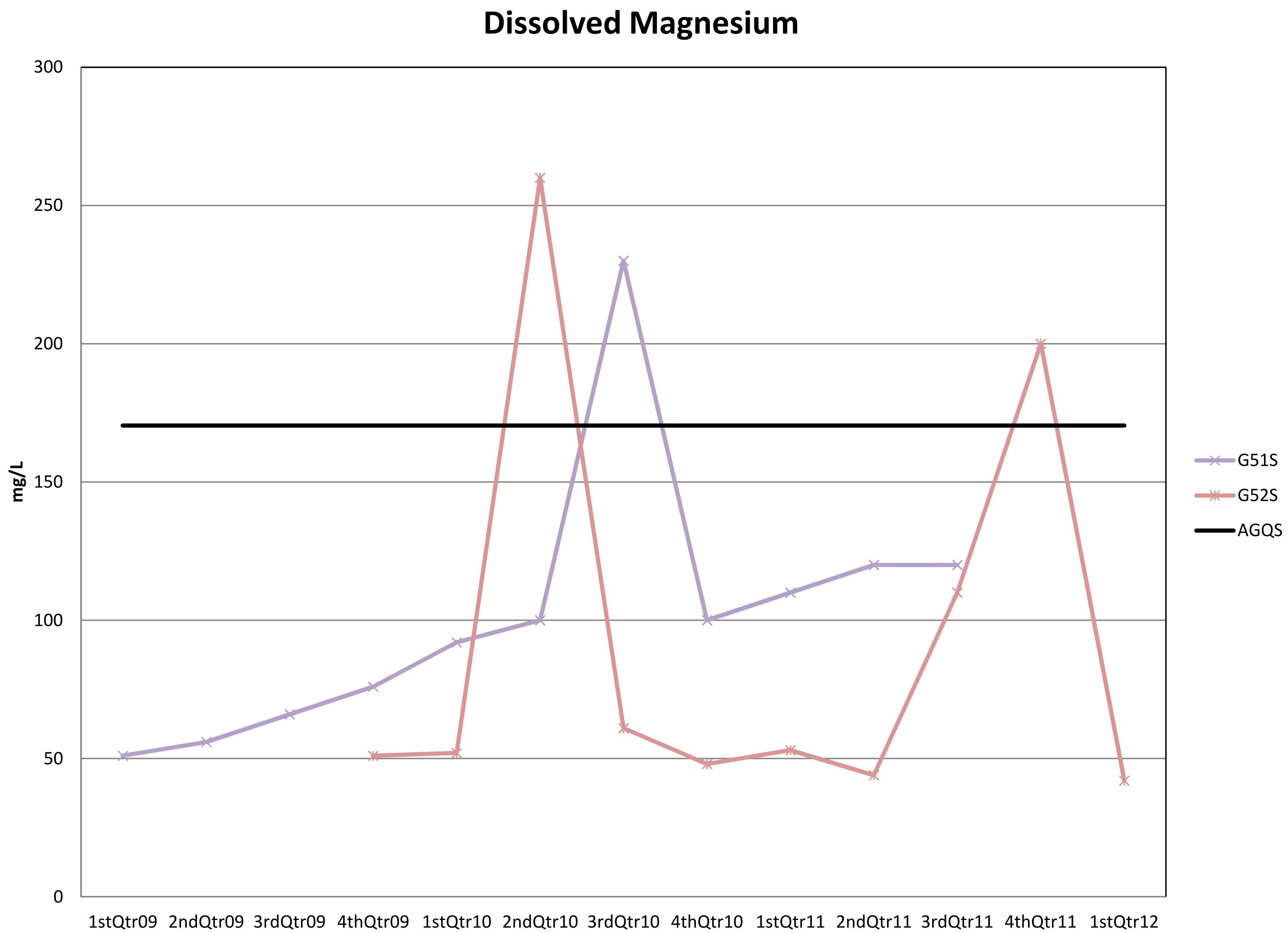
Winnebago Landfill
Upper Zone



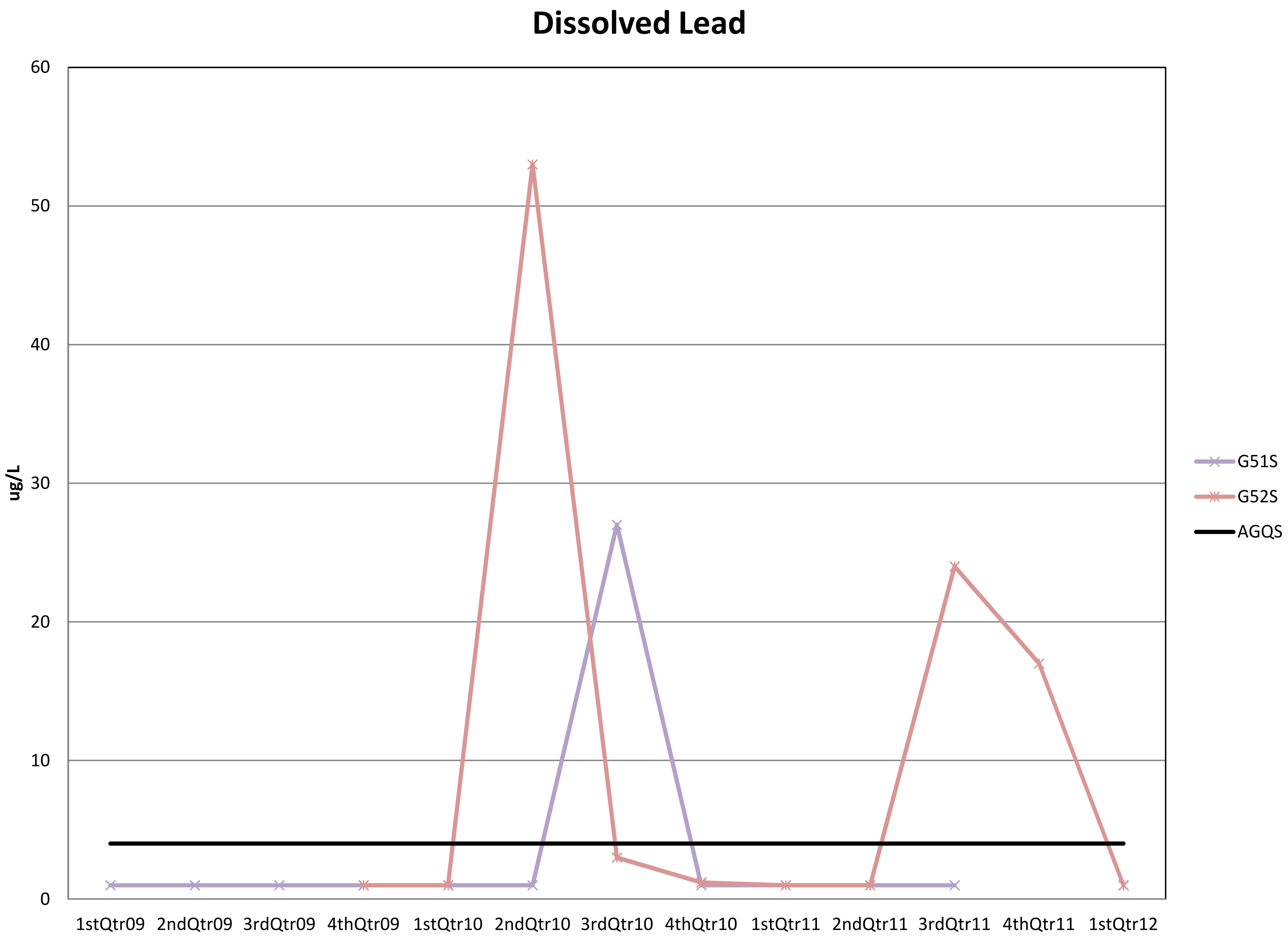
Winnebago Landfill
Upper Zone



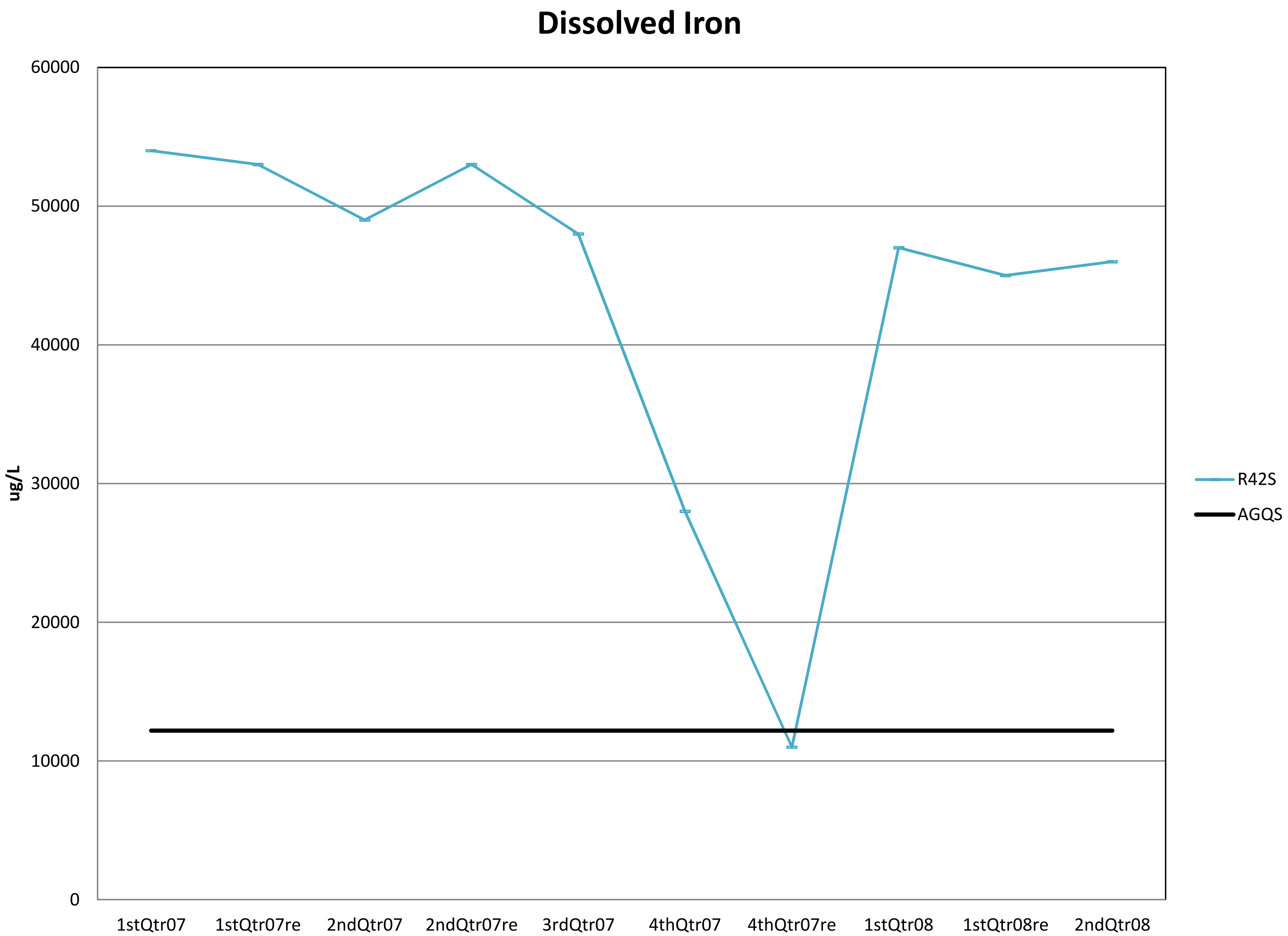
Winnebago Landfill
Upper Zone



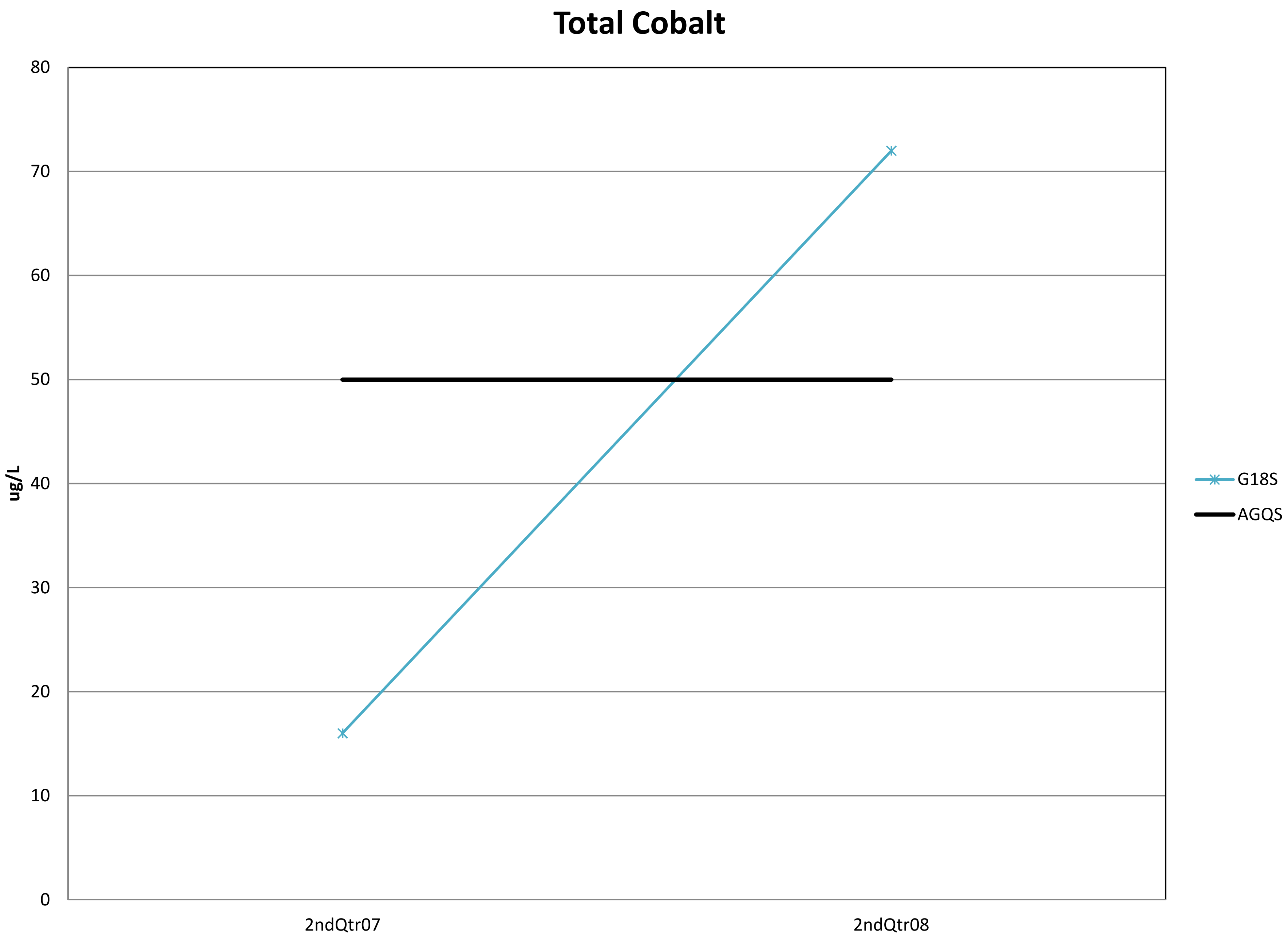
Winnebago Landfill
Upper Zone



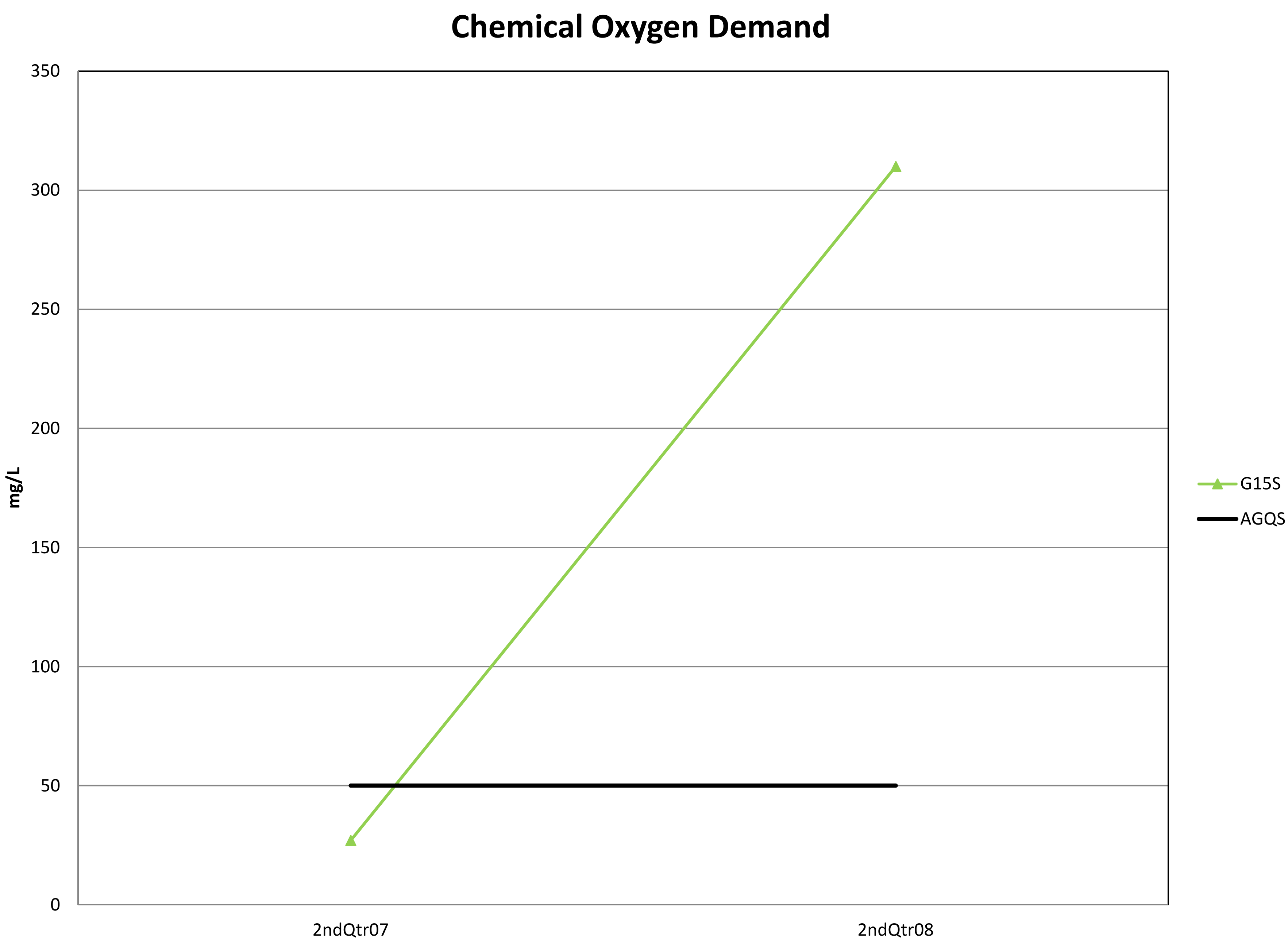
Winnebago Landfill
Upper Zone

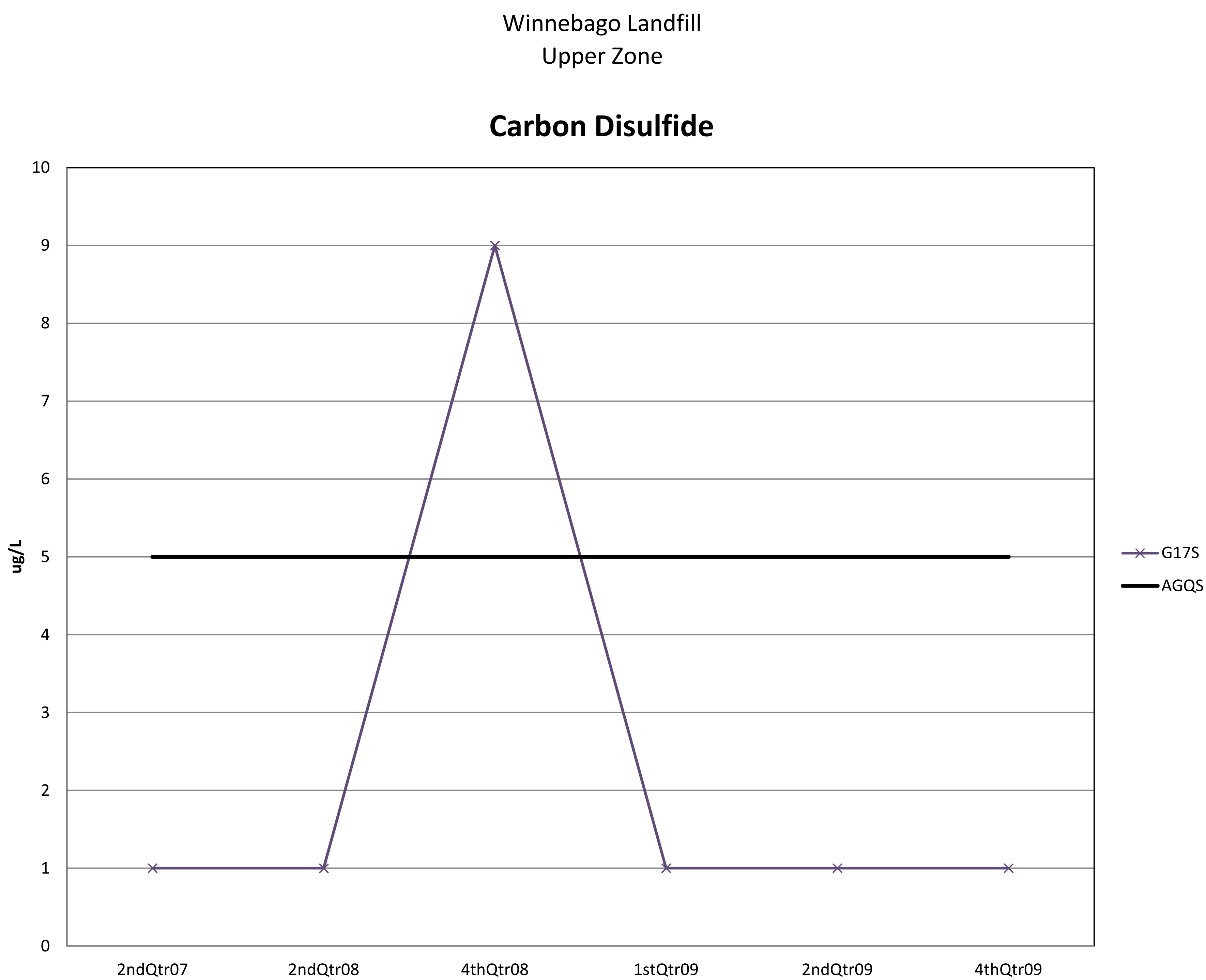


Winnebago Landfill
Upper Zone



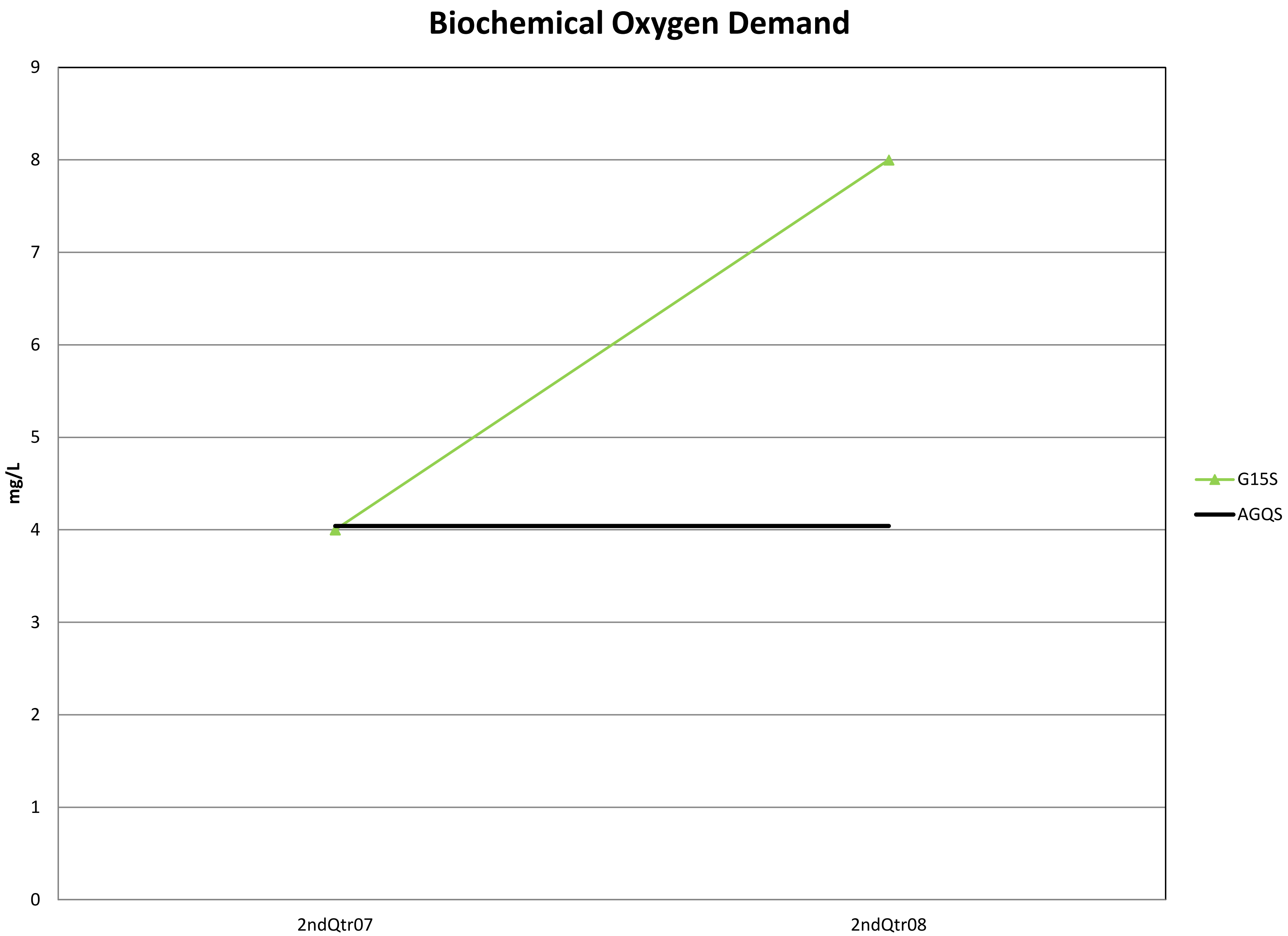
Winnebago Landfill
Upper Zone



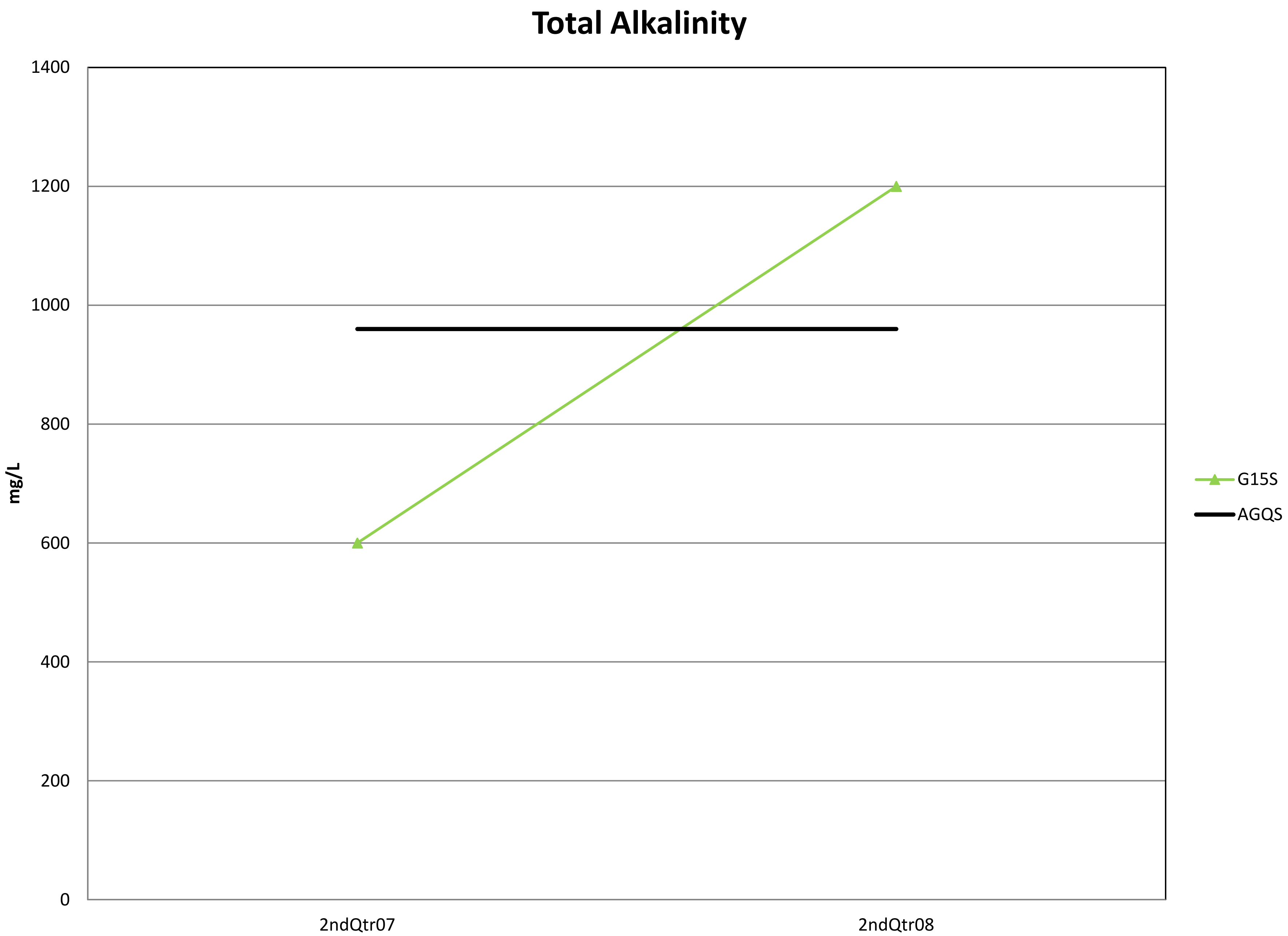


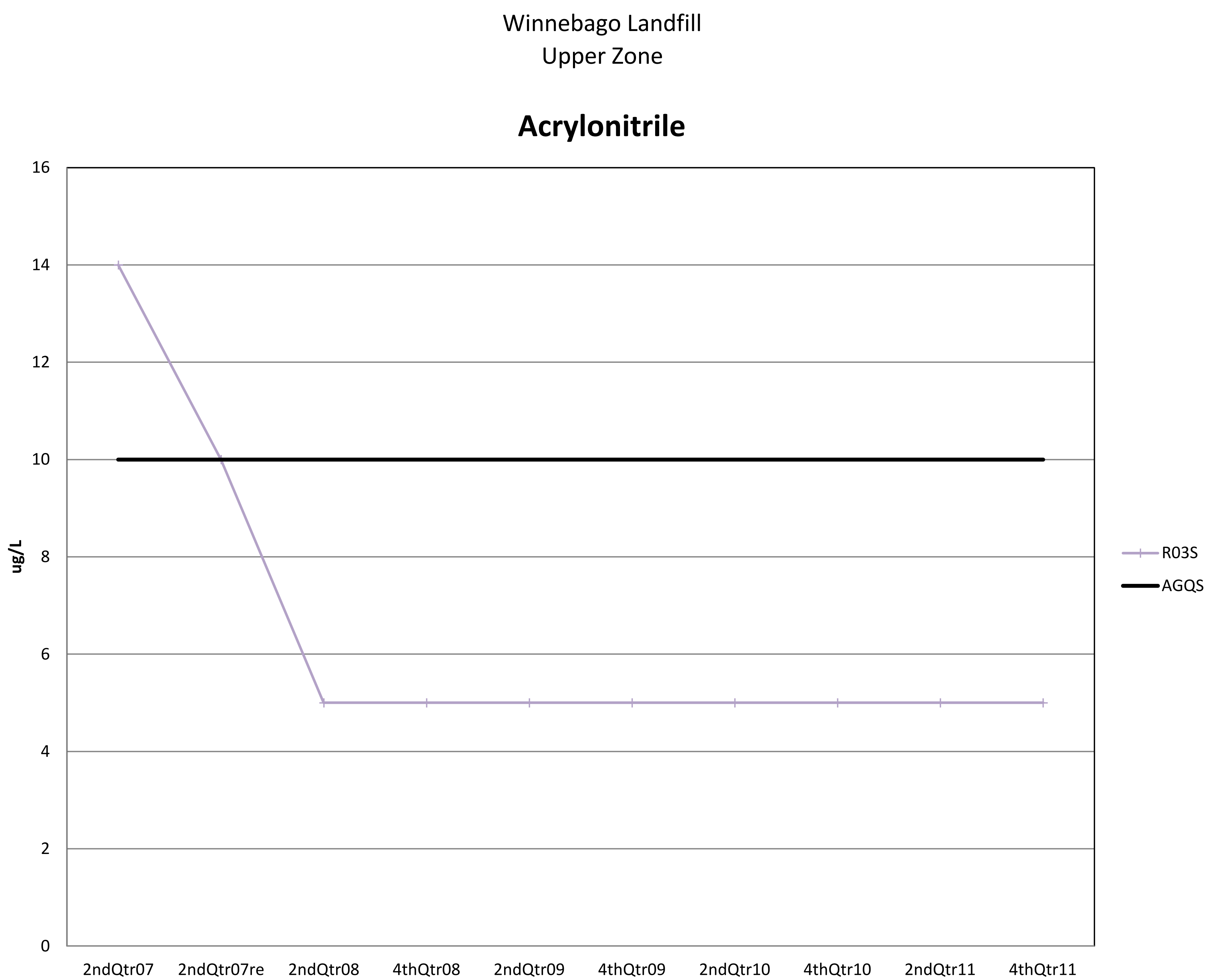
Winnebago Landfill
Upper Zone
Carbon Disulfide
ug/L
10
9
8
7
6
5
4
3
2
1
0
2ndQtr07
2ndQtr08
4thQtr08
1stQtr09
2ndQtr09
4thQtr09
G17S
AGQS

Winnebago Landfill
Upper Zone

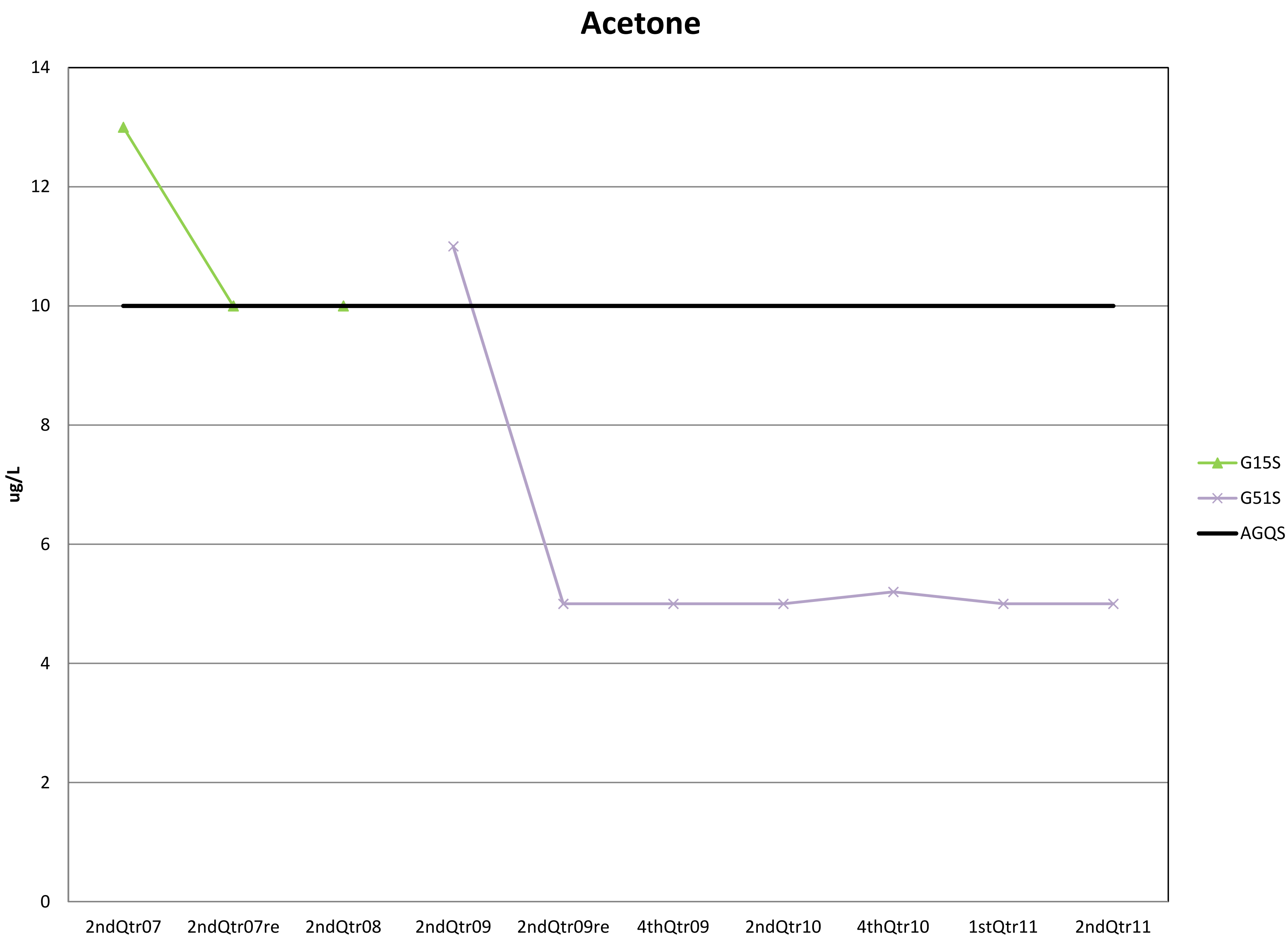


Winnebago Landfill
Upper Zone

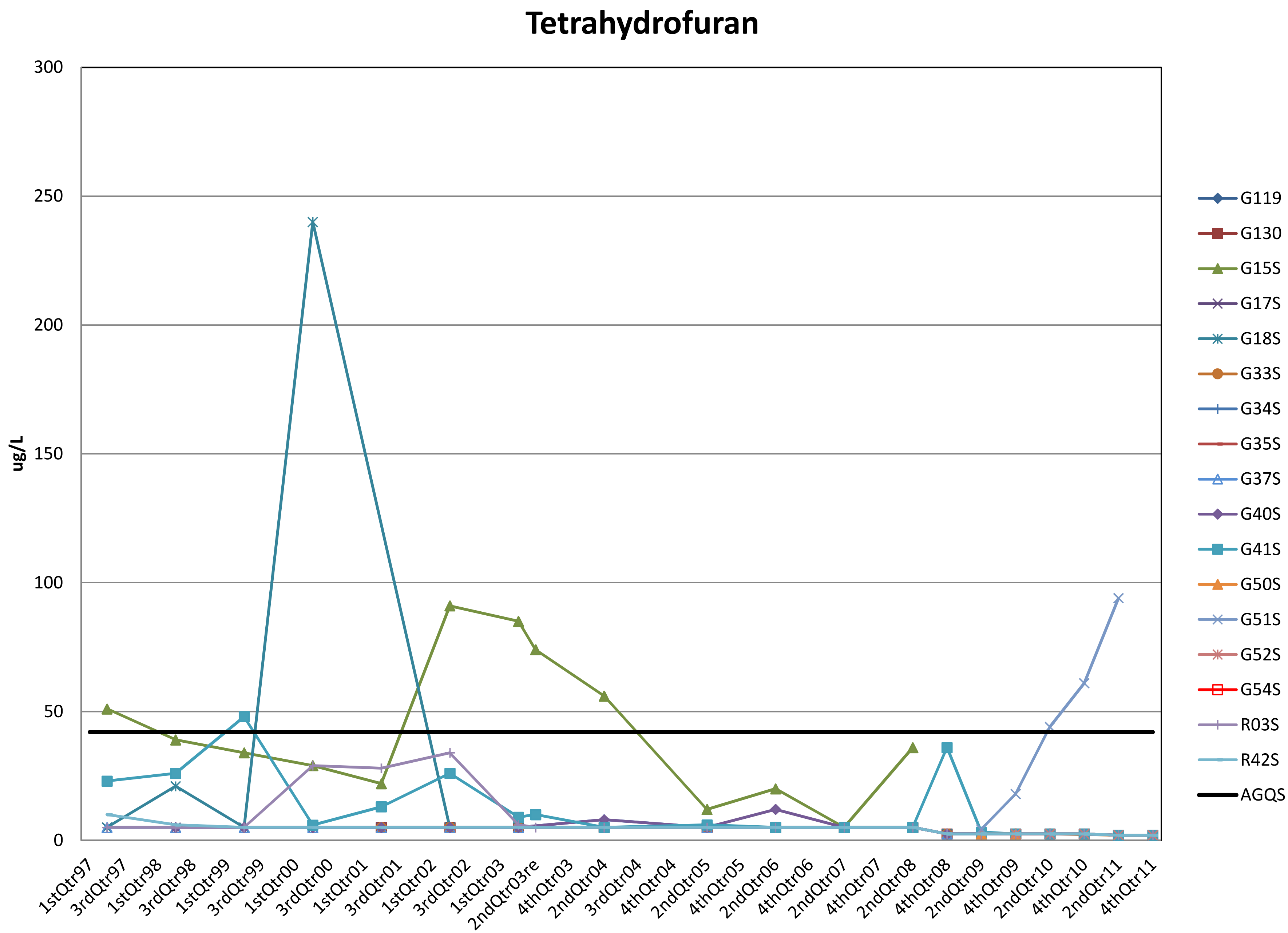



Winnebago Landfill
Upper Zone
Acrylonitrile
ug/L
16
14
12
10
8
6
4
2
0
2ndQtr07
2ndQtr07re
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
R03S
AGQS

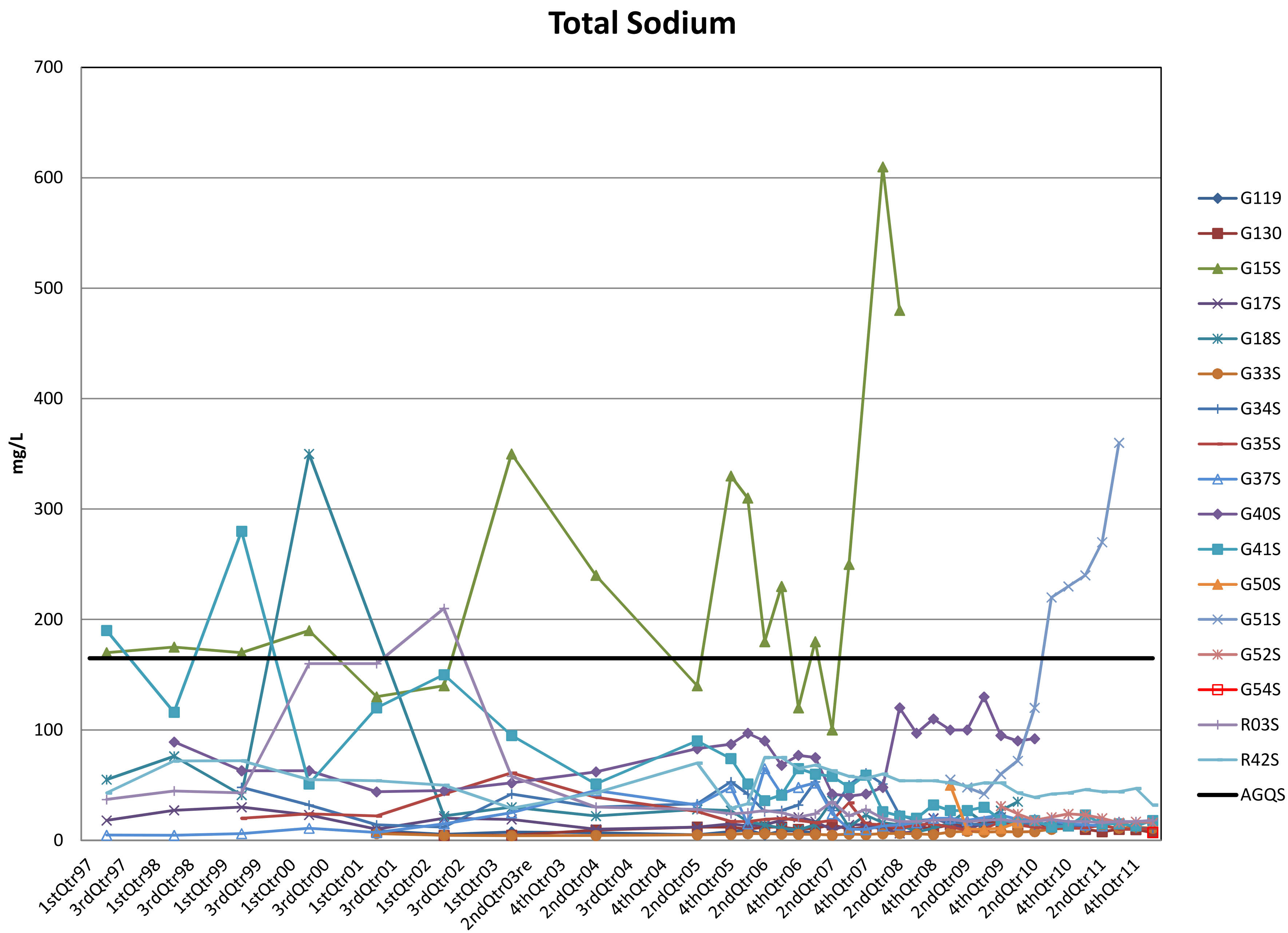
Winnebago Landfill
Upper Zone



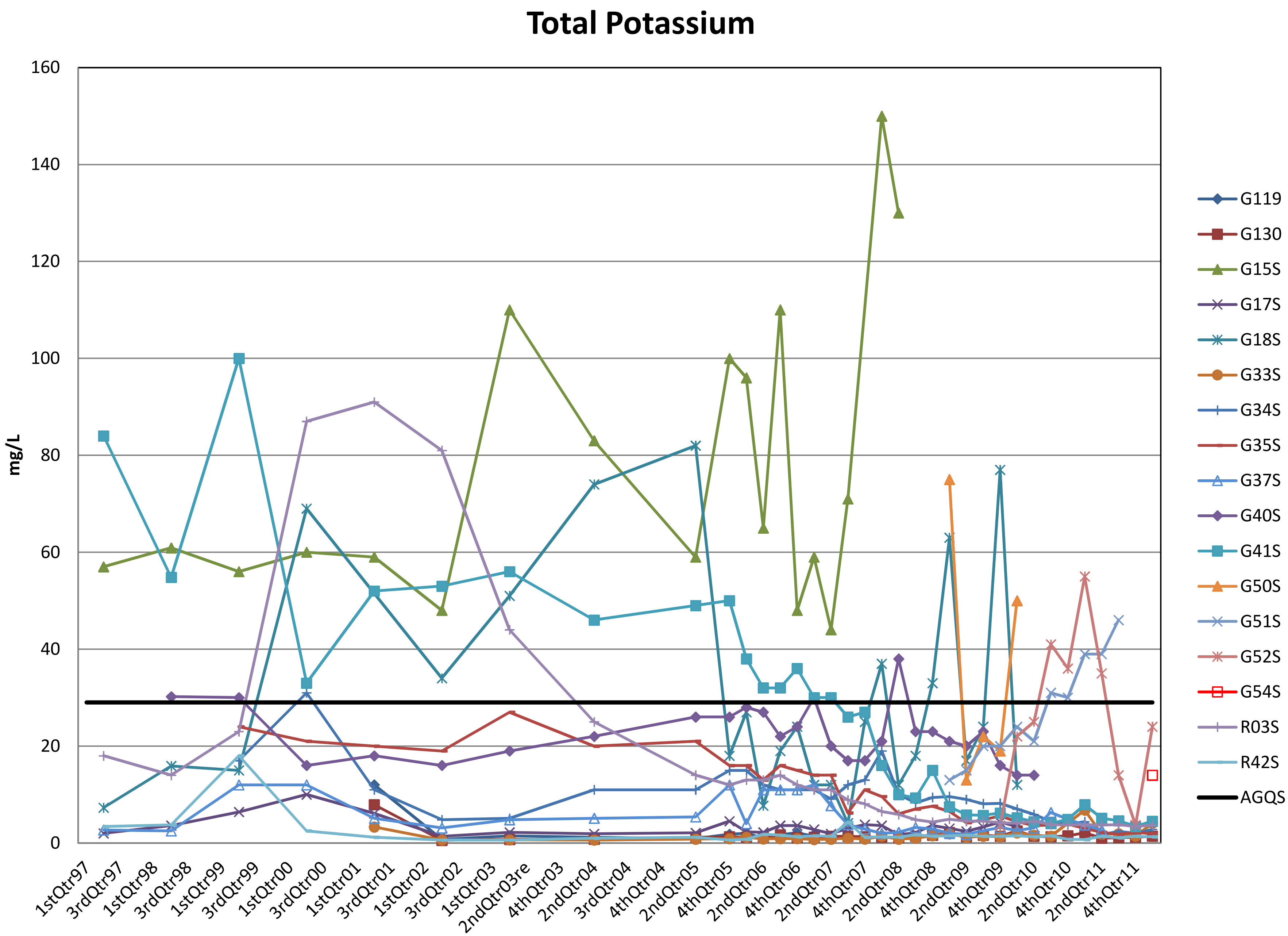
Winnebago Landfill
Upper Zone

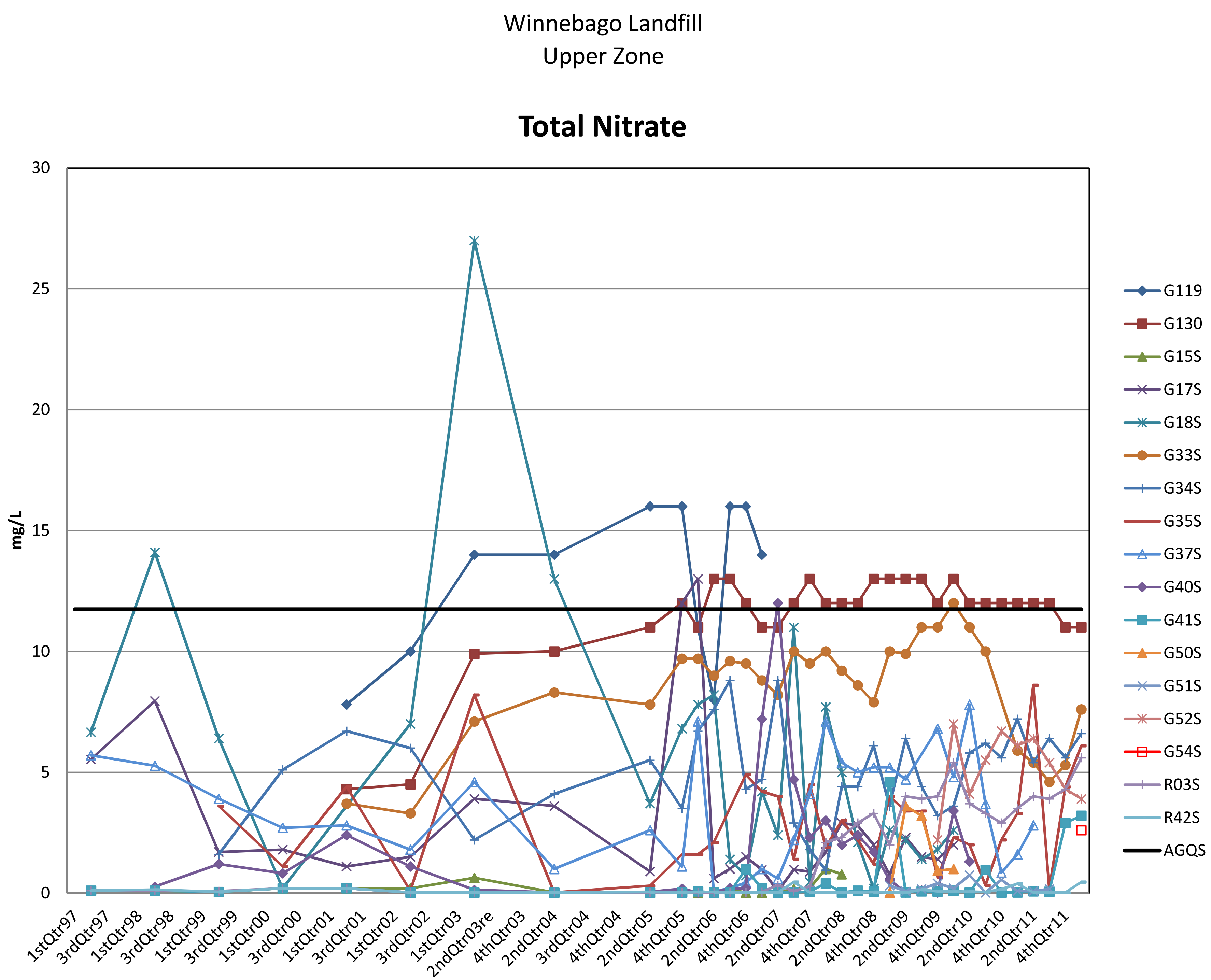


Winnebago Landfill
Upper Zone



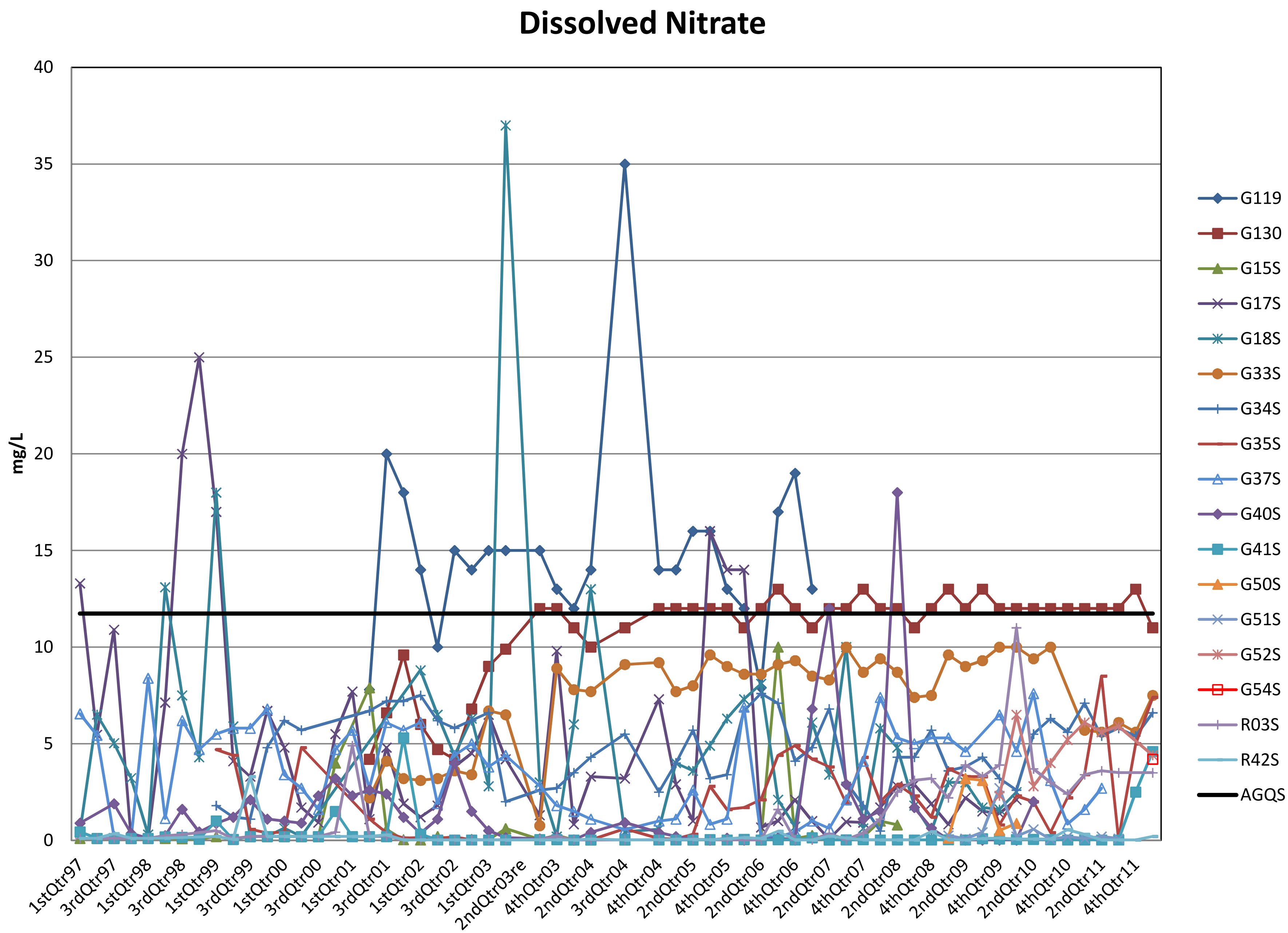
Winnebago Landfill
Upper Zone



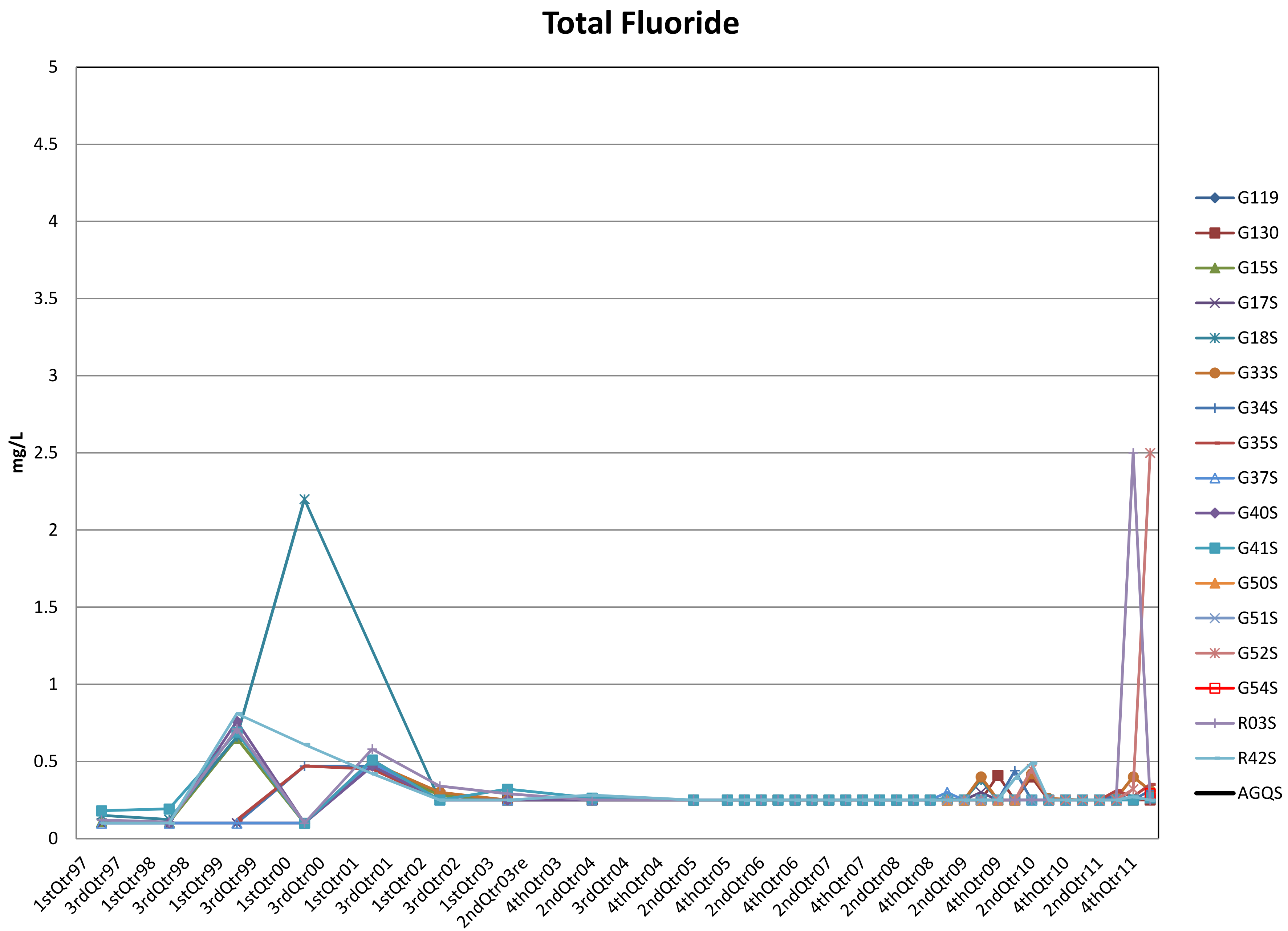


Winnebago Landfill
Upper Zone
Total Nitrate
mg/L
0
5
10
15
20
25
30
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G119
G130
G15S
G17S
G18S
G33S
G34S
G35S
G37S
G40S
G41S
G50S
G51S
G52S
G54S
R03S
R42S
AGQS

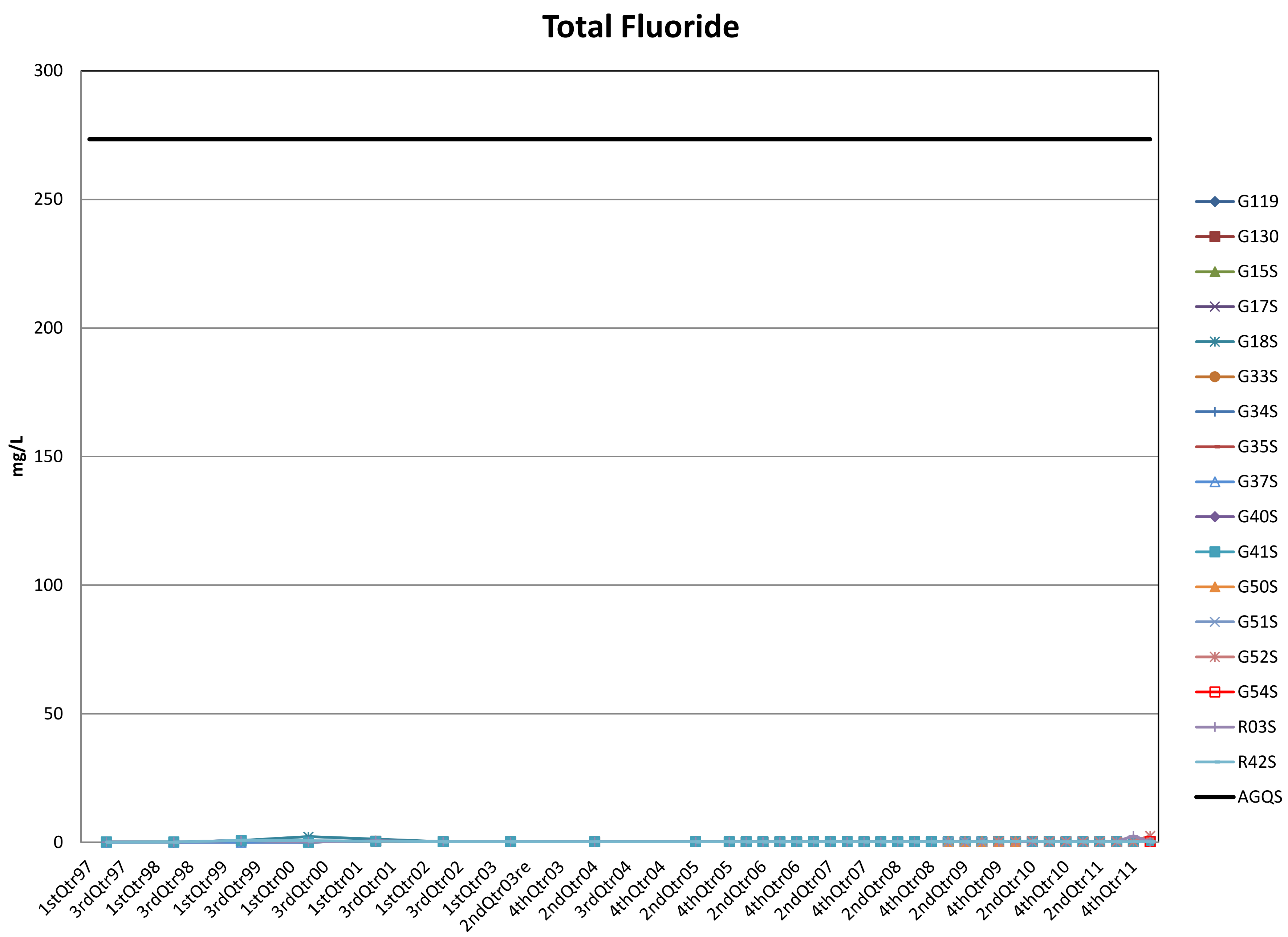
Winnebago Landfill
Upper Zone



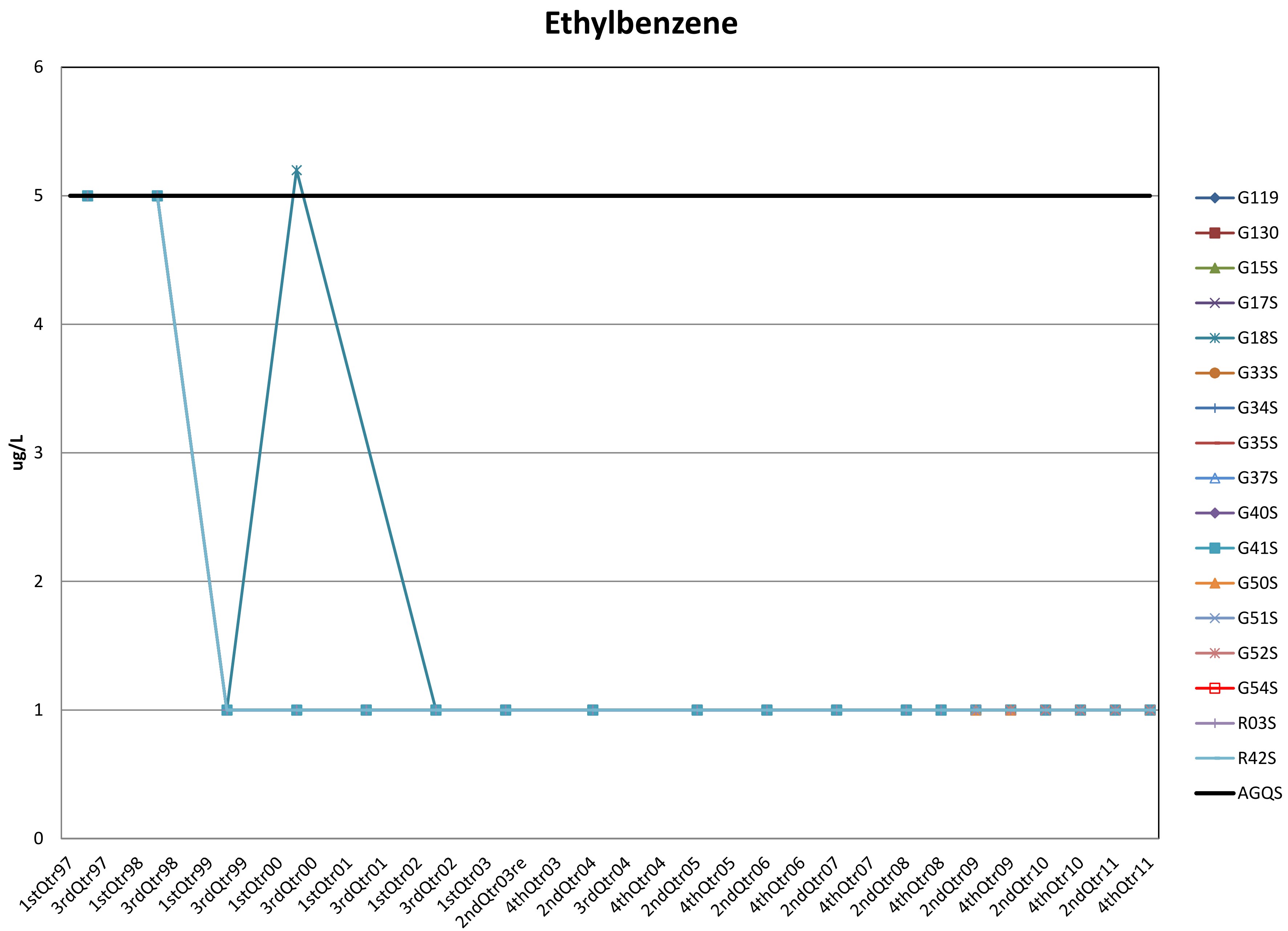
Winnebago Landfill
Upper Zone



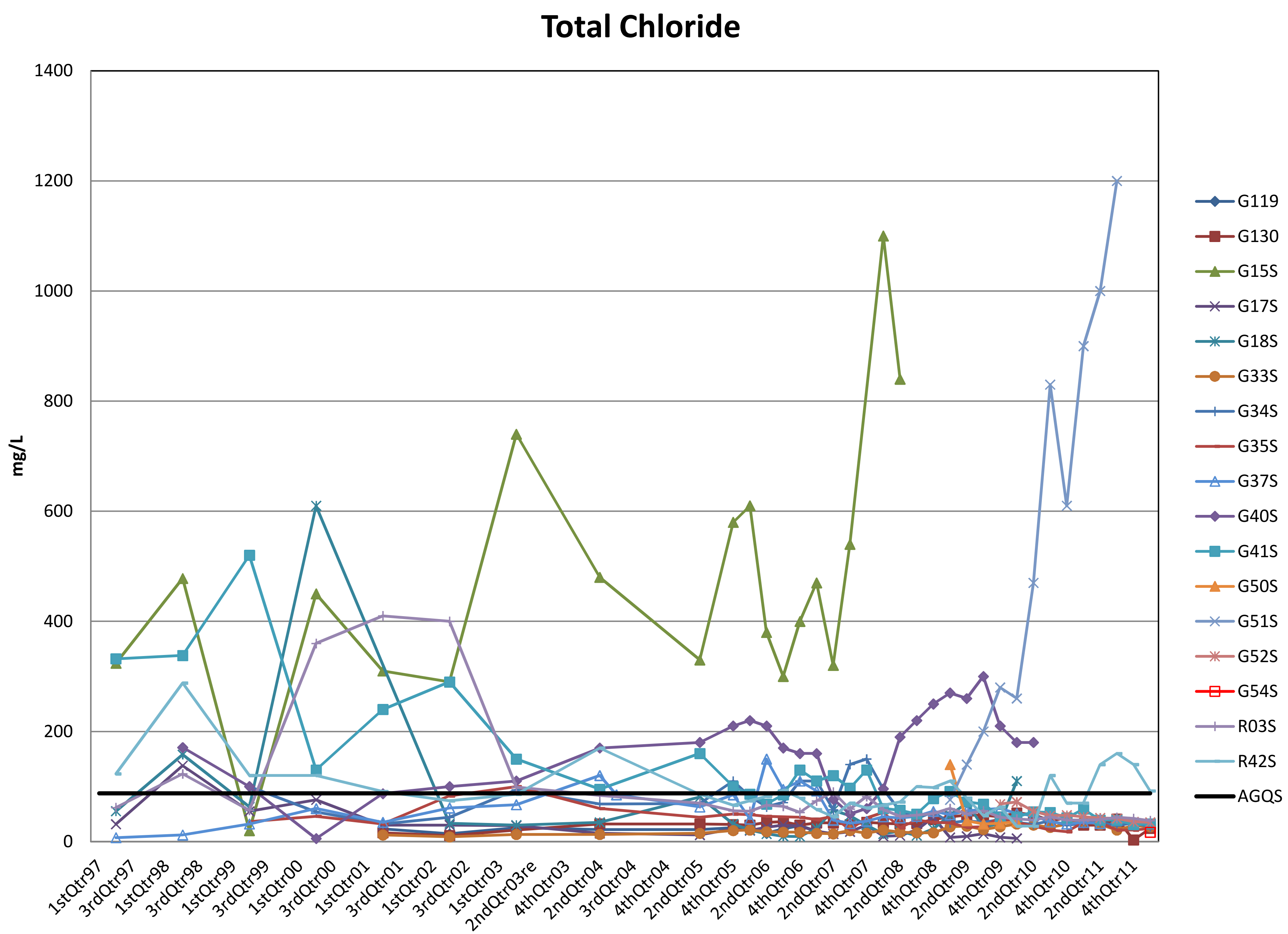
Winnebago Landfill
Upper Zone



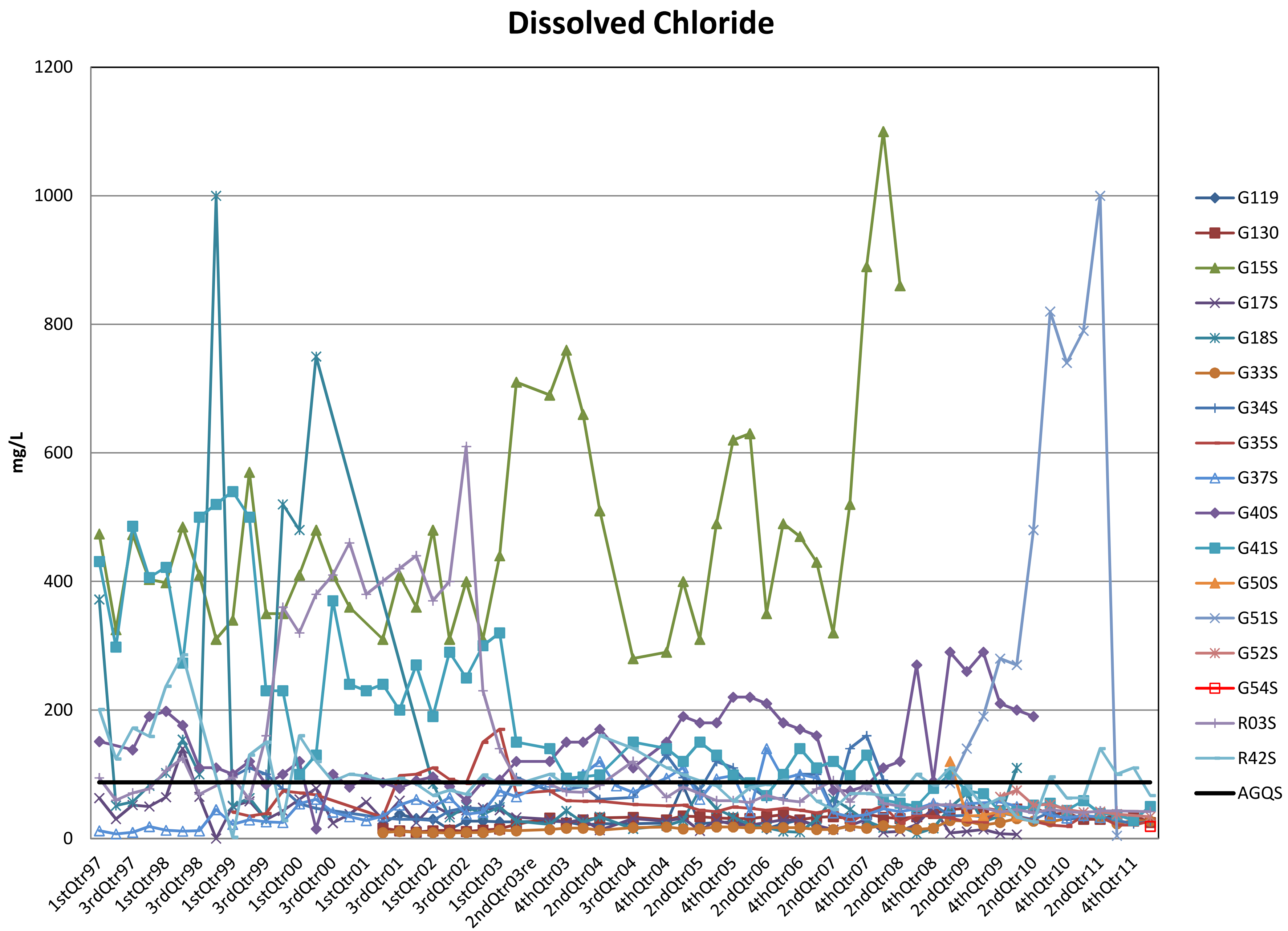
Winnebago Landfill
Upper Zone



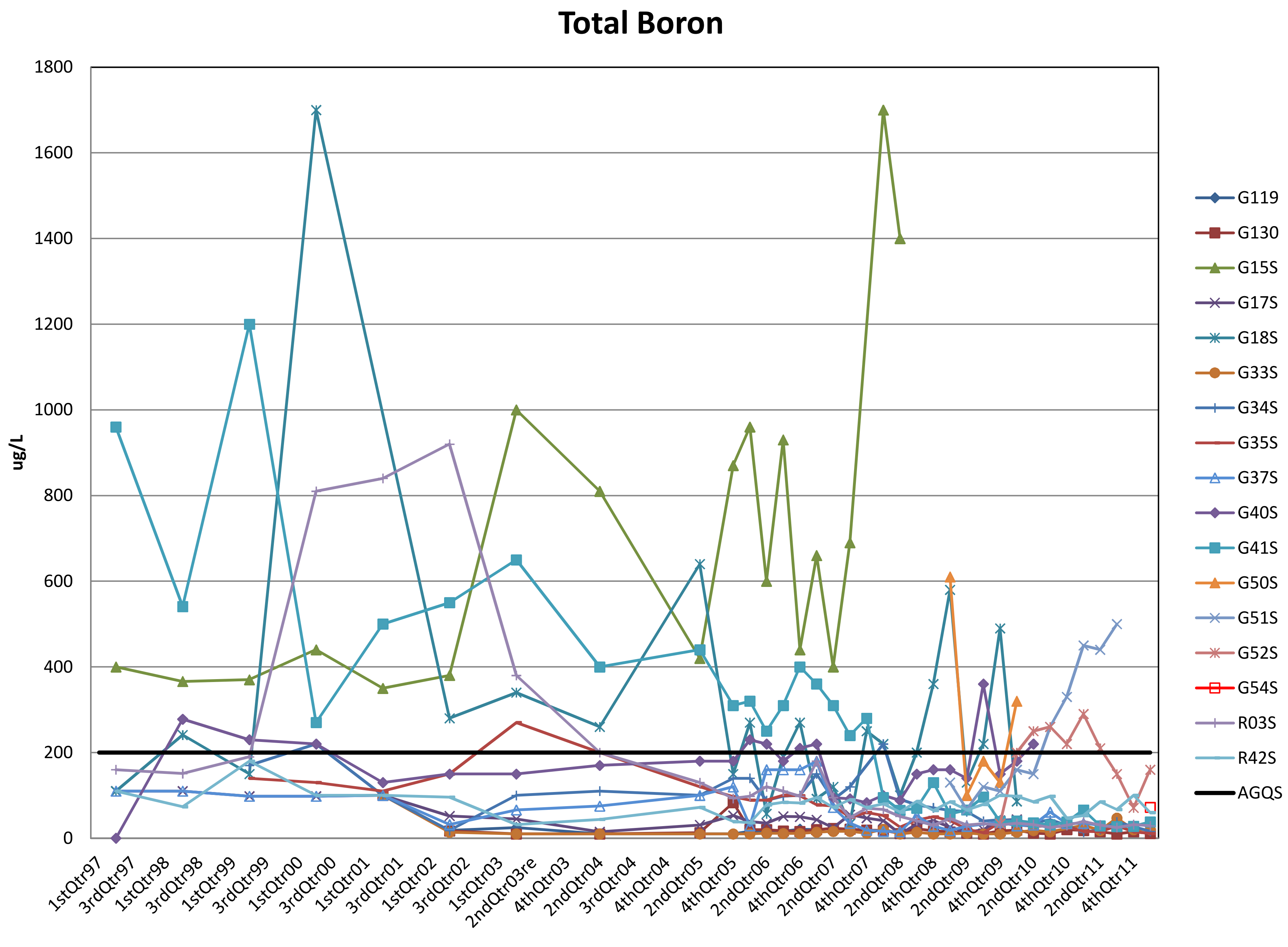
Winnebago Landfill
Upper Zone



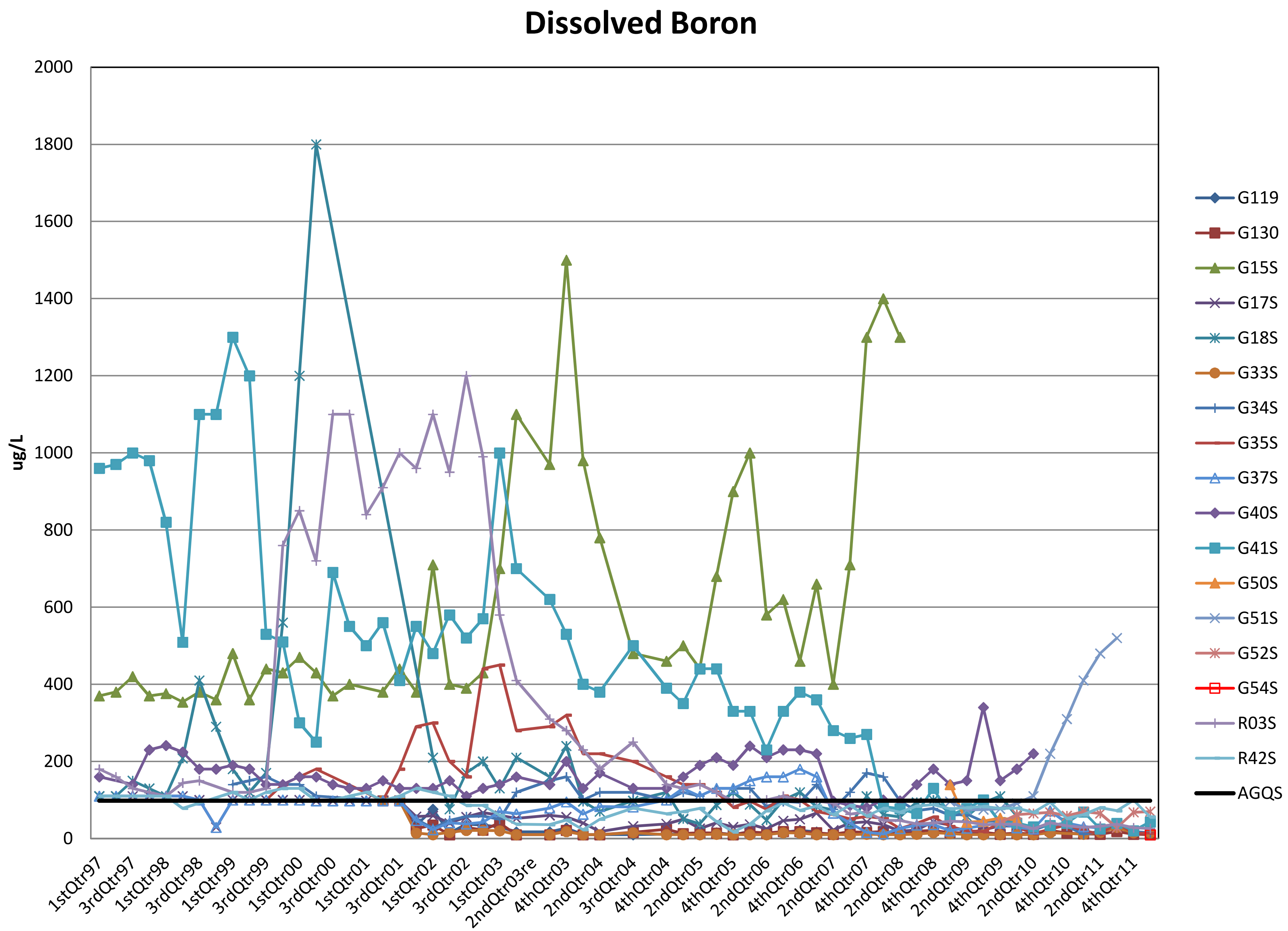
Winnebago Landfill
Upper Zone



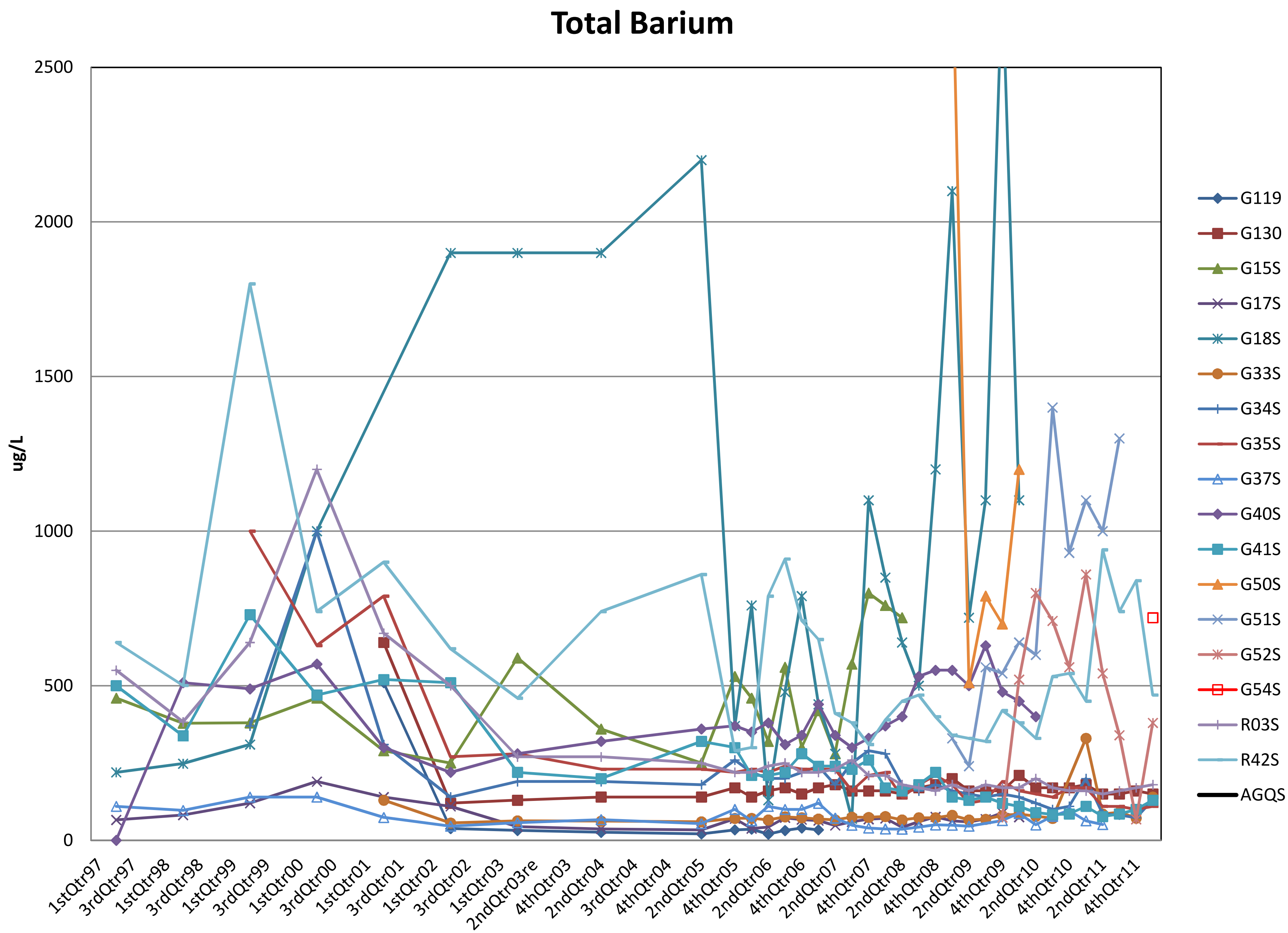
Winnebago Landfill
Upper Zone



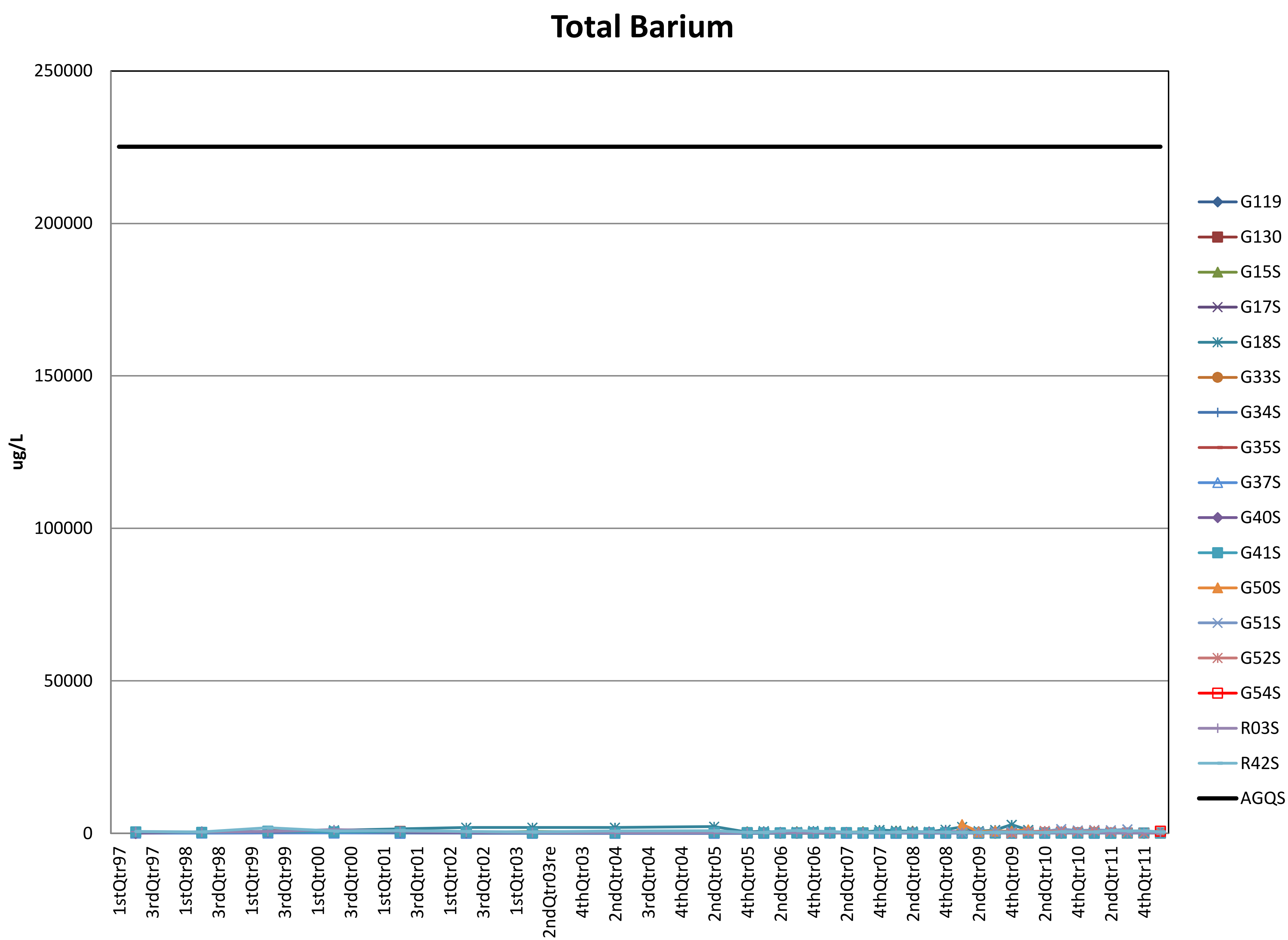
Winnebago Landfill
Upper Zone

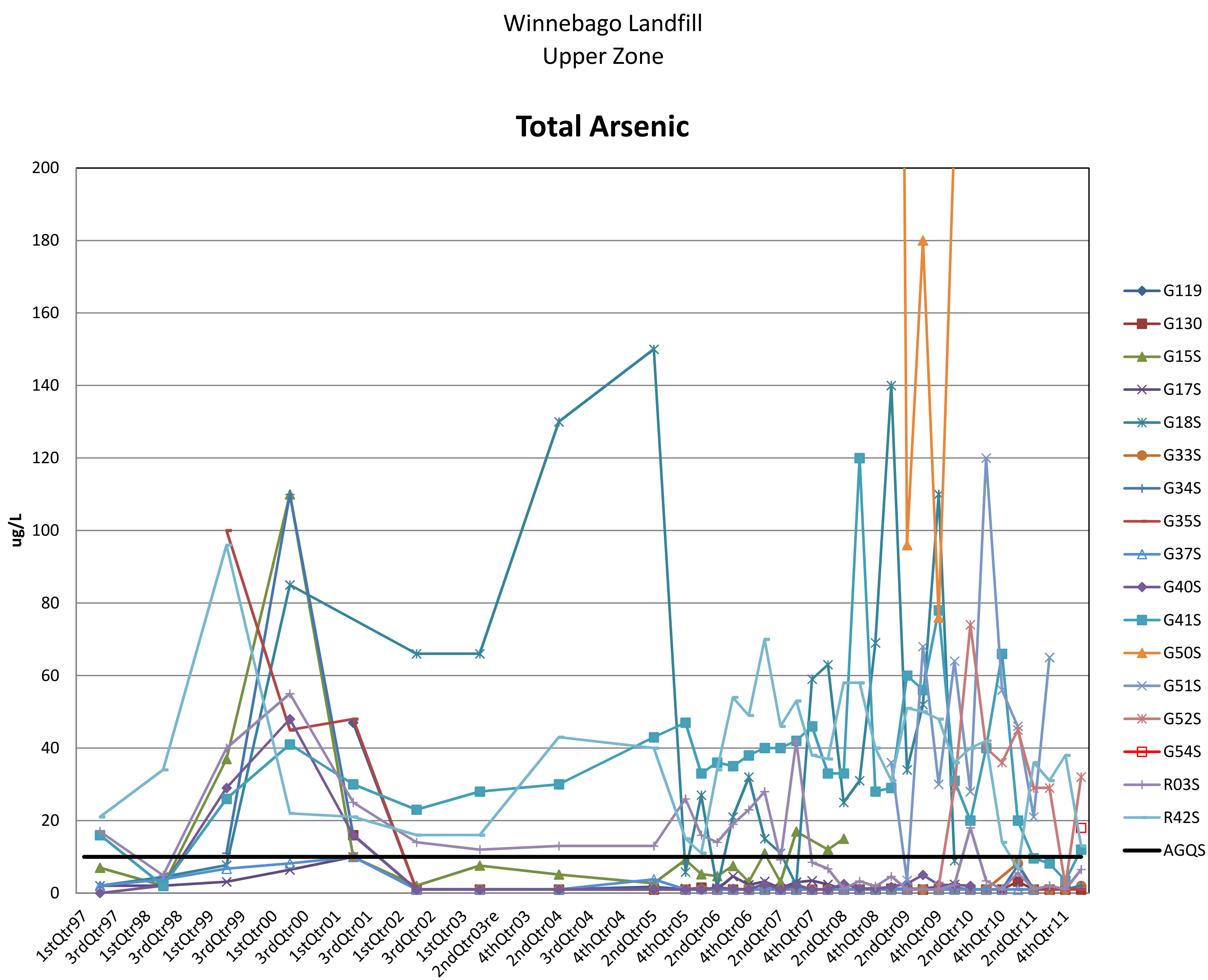


Winnebago Landfill
Upper Zone



Winnebago Landfill
Upper Zone

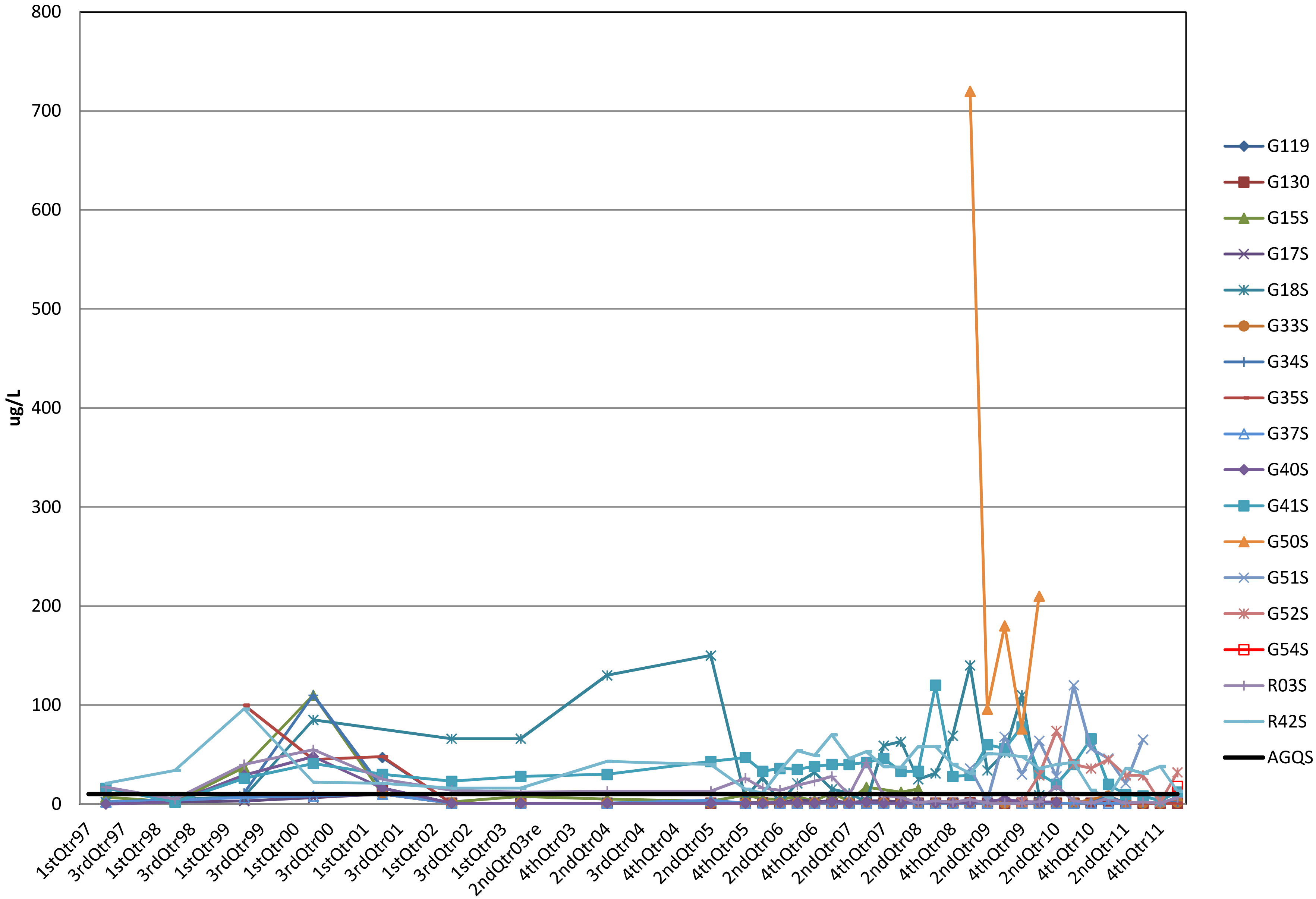




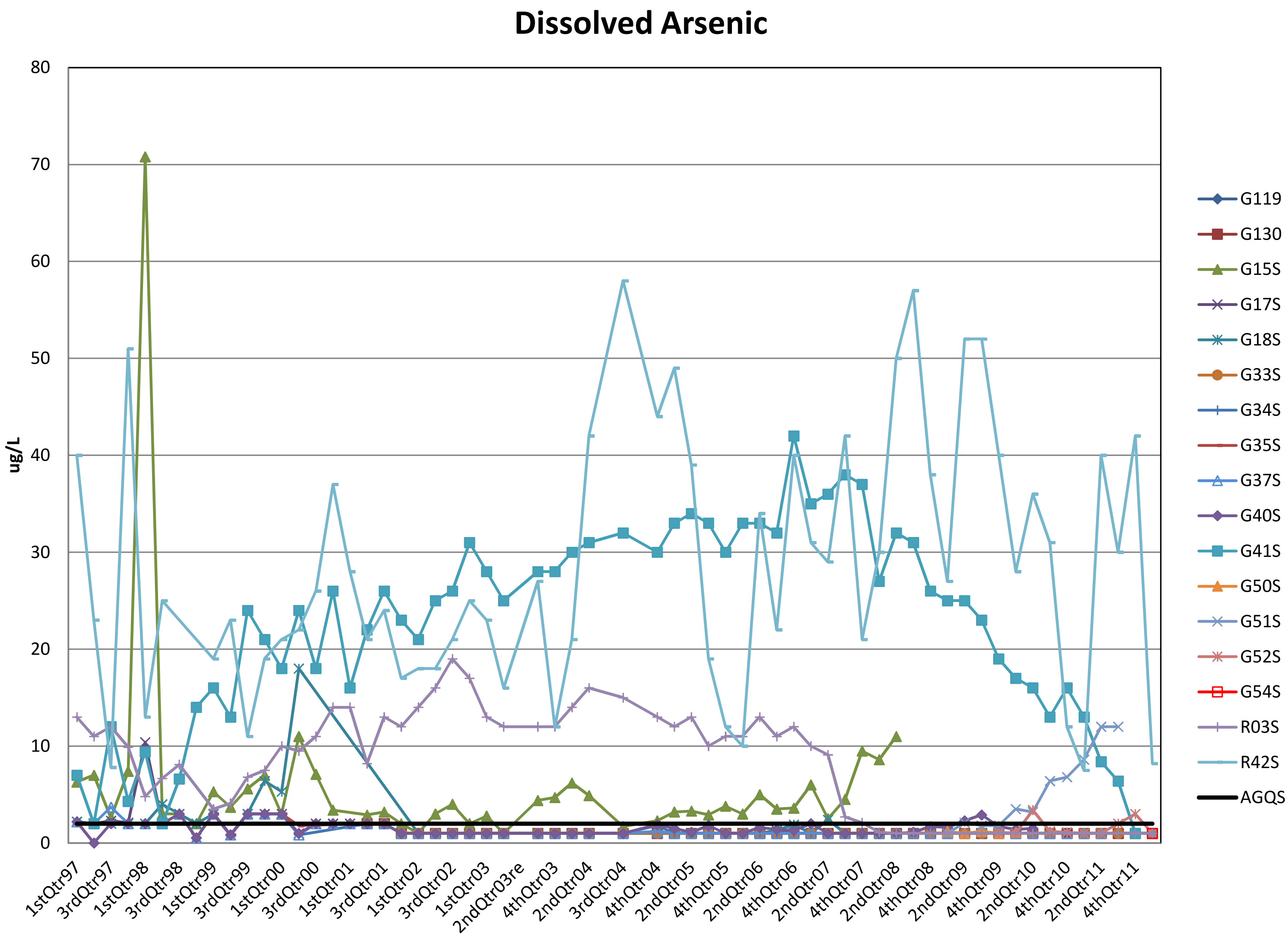
Winnebago Landfill
Upper Zone
Total Arsenic
ug/L
200
180
160
140
120
100
80
60
40
20
0
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G119
G130
G15S
G17S
G18S
G33S
G34S
G35S
G37S
G40S
G41S
G50S
G51S
G52S
G54S
R03S
R42S
AGQS

Winnebago Landfill
Upper Zone

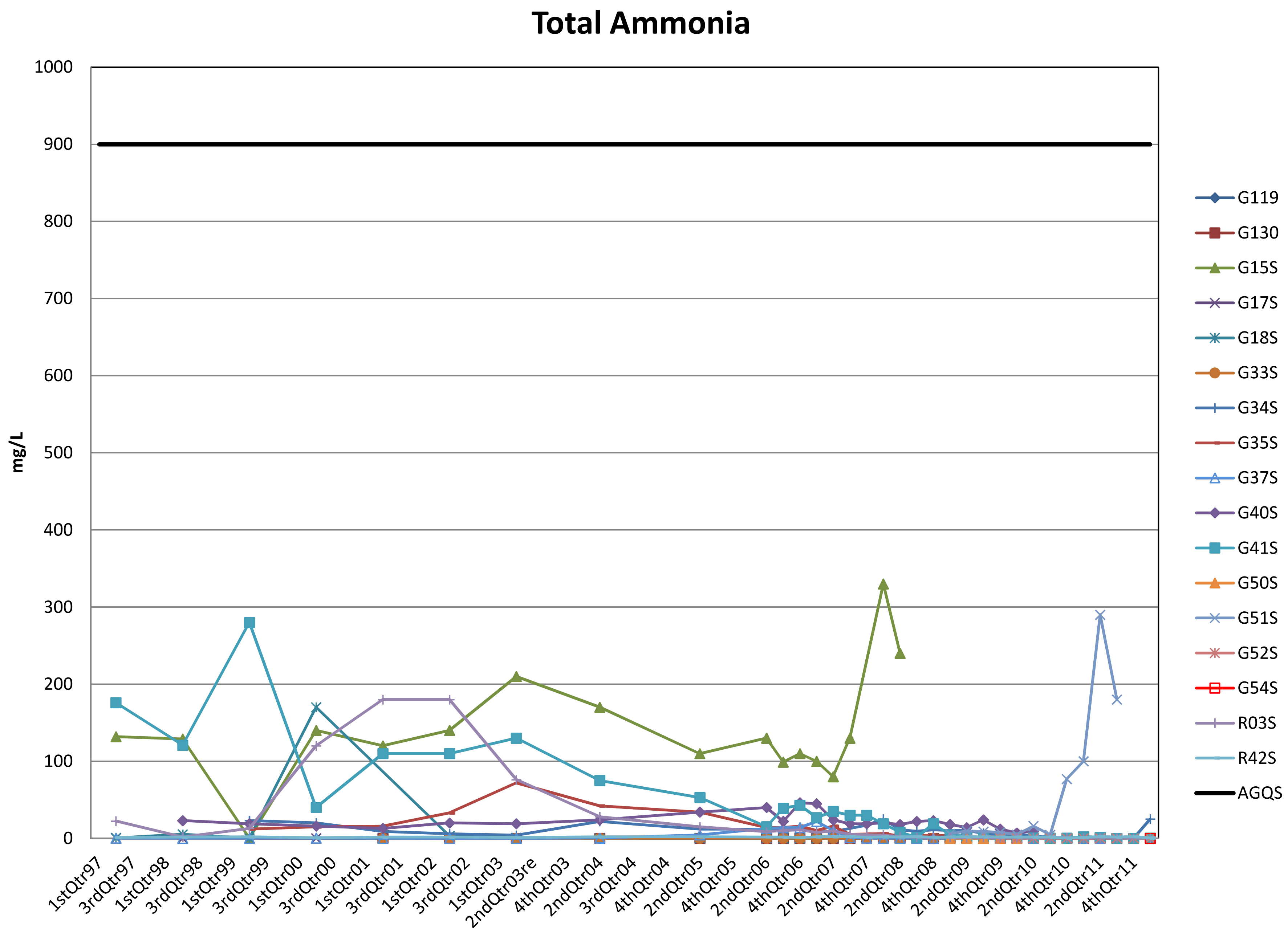
Total Arsenic



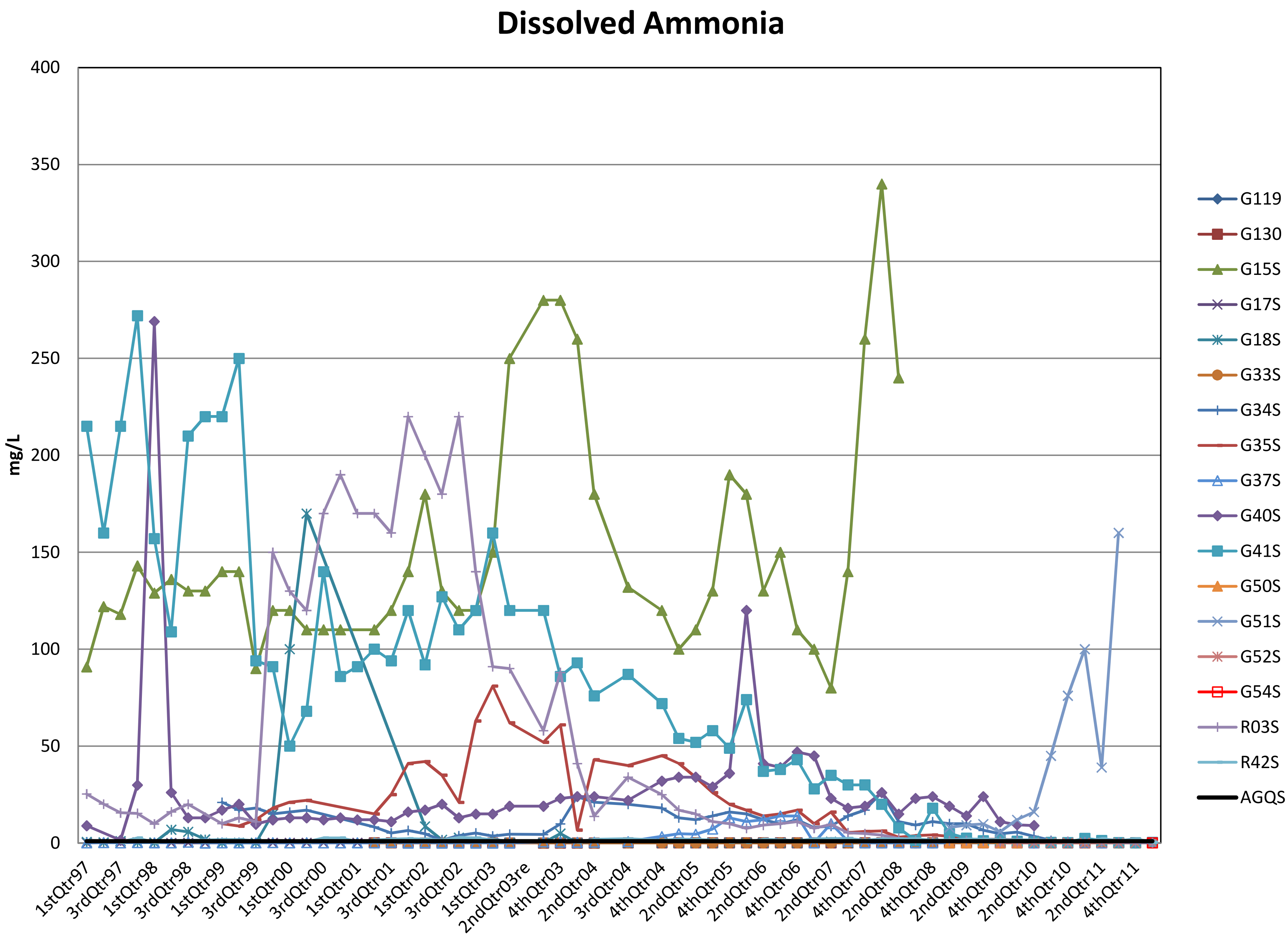
Winnebago Landfill
Upper Zone



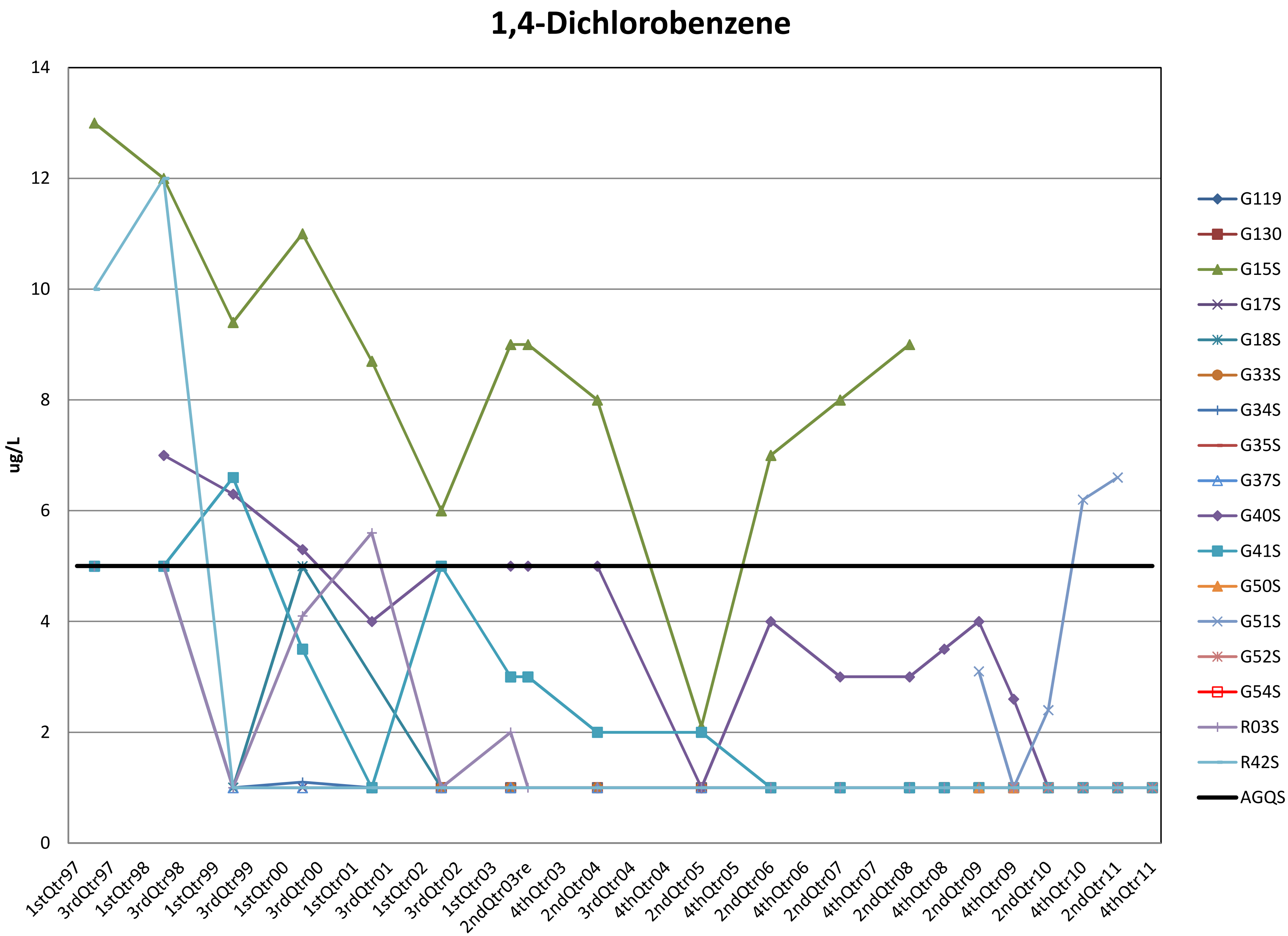
Winnebago Landfill
Upper Zone



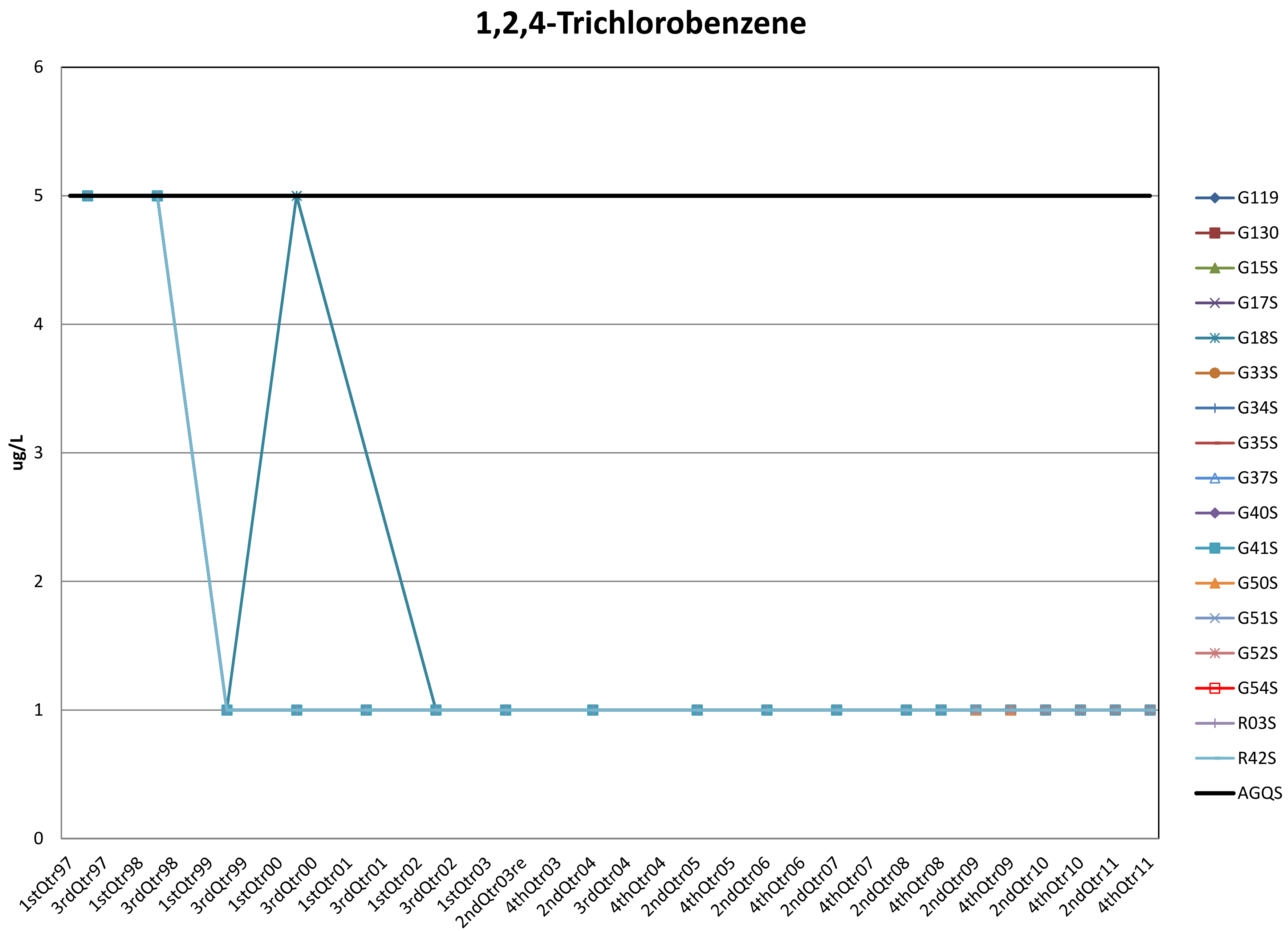
Winnebago Landfill
Upper Zone



Winnebago Landfill
Upper Zone

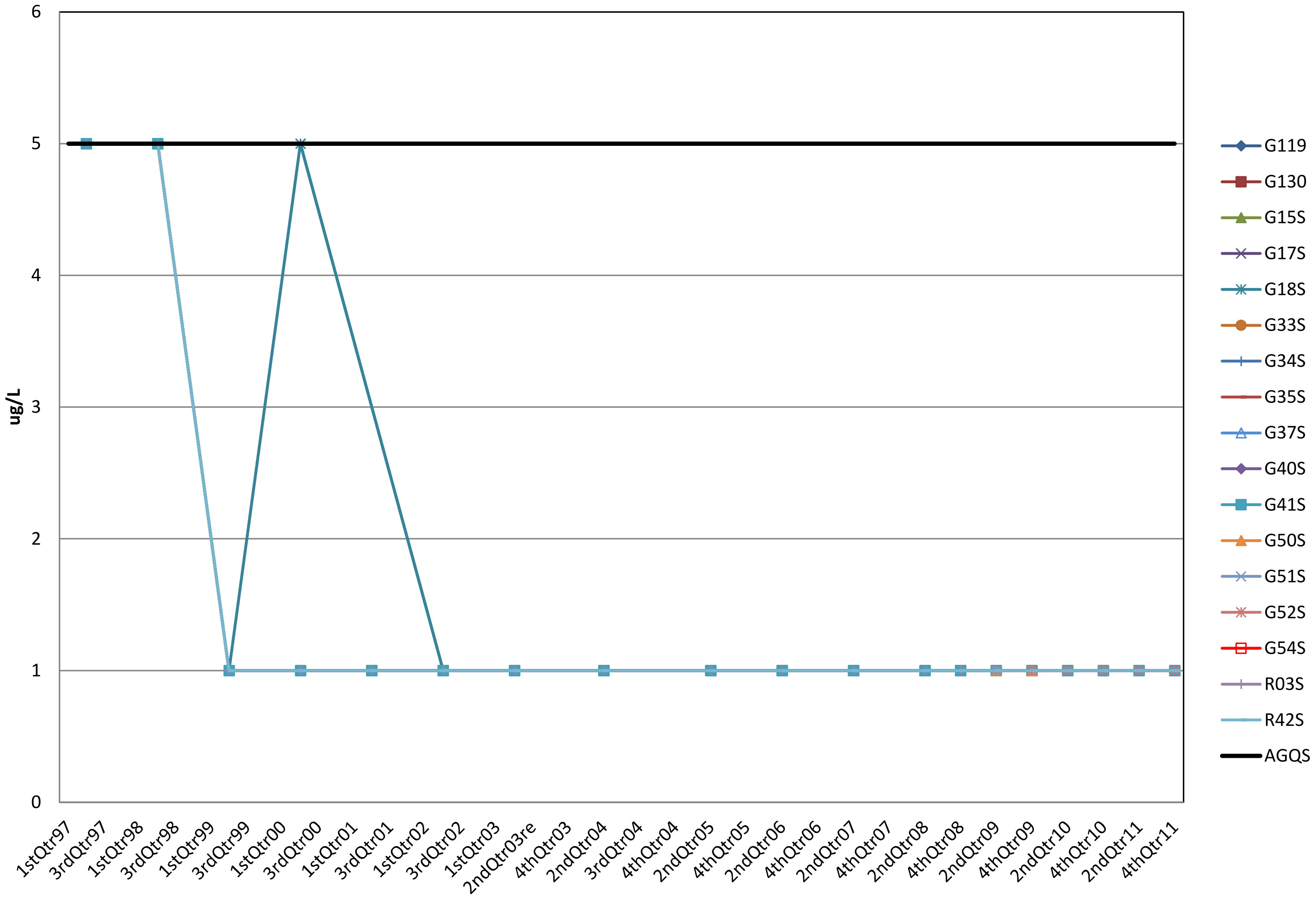


Winnebago Landfill
Upper Zone



Winnebago Landfill
Upper Zone

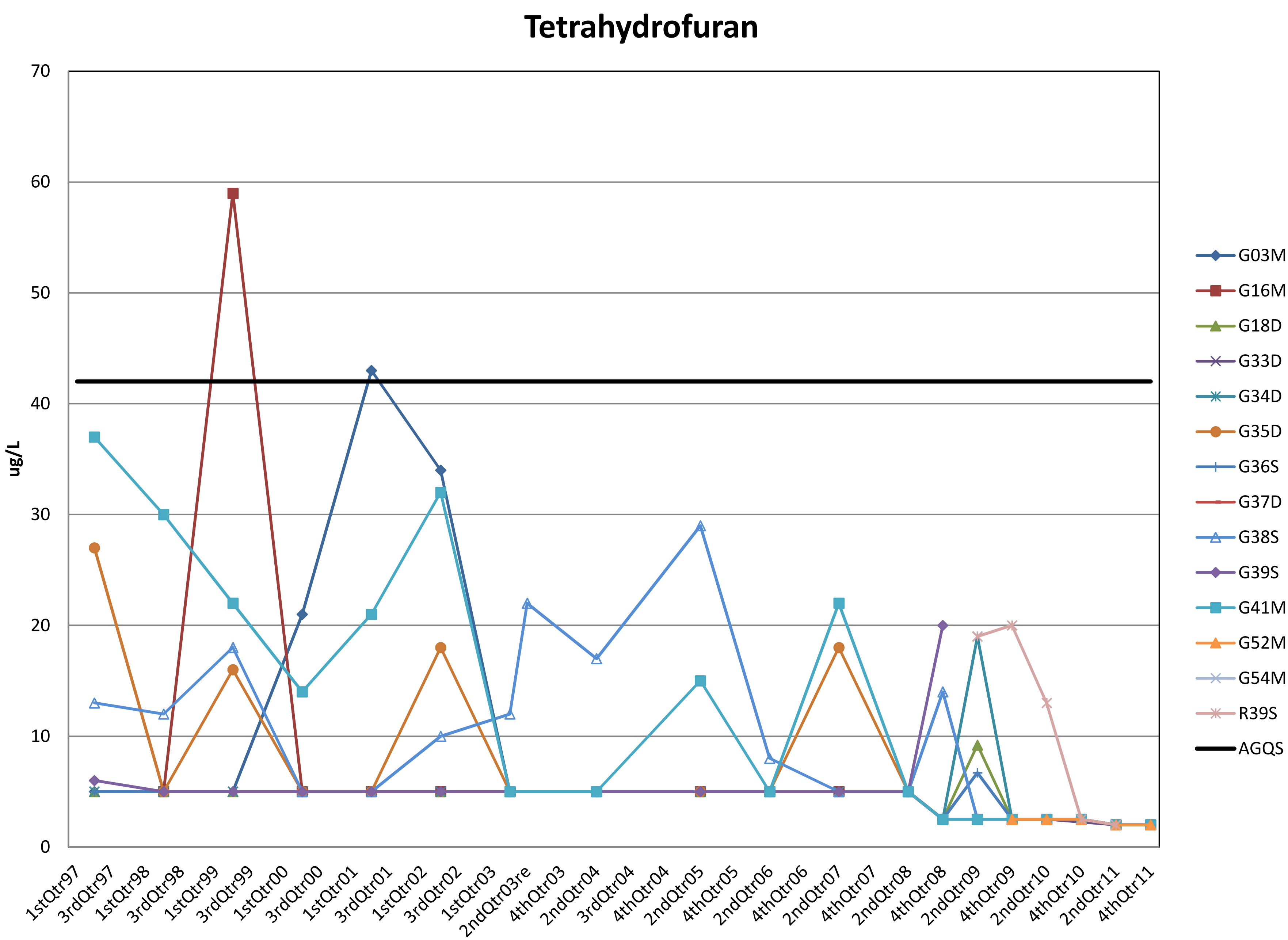
1,2,3-Trichlorobenzene



APPENDIX E

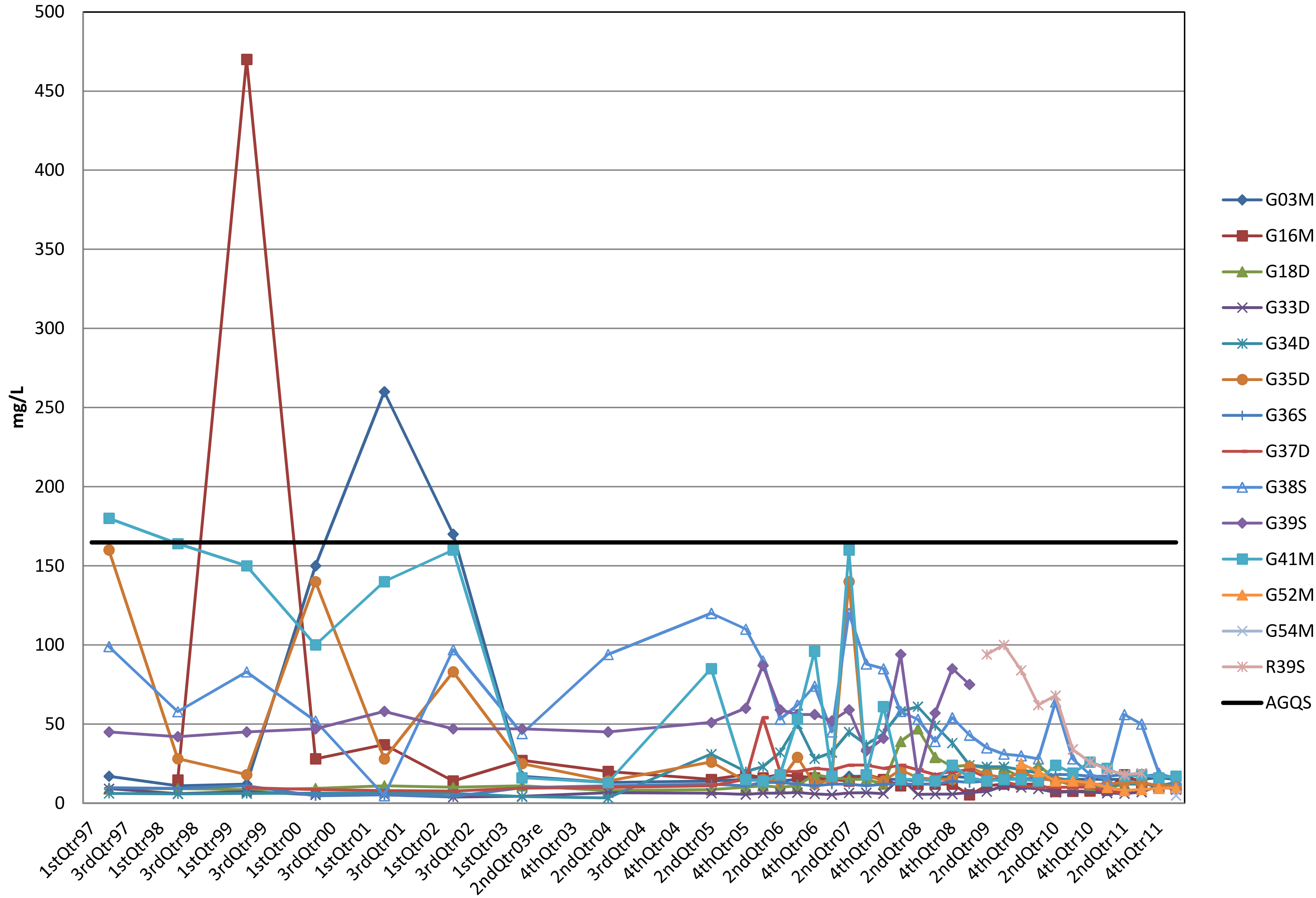
Lower Zone Trend Graphs

Winnebago Landfill
Lower Zone

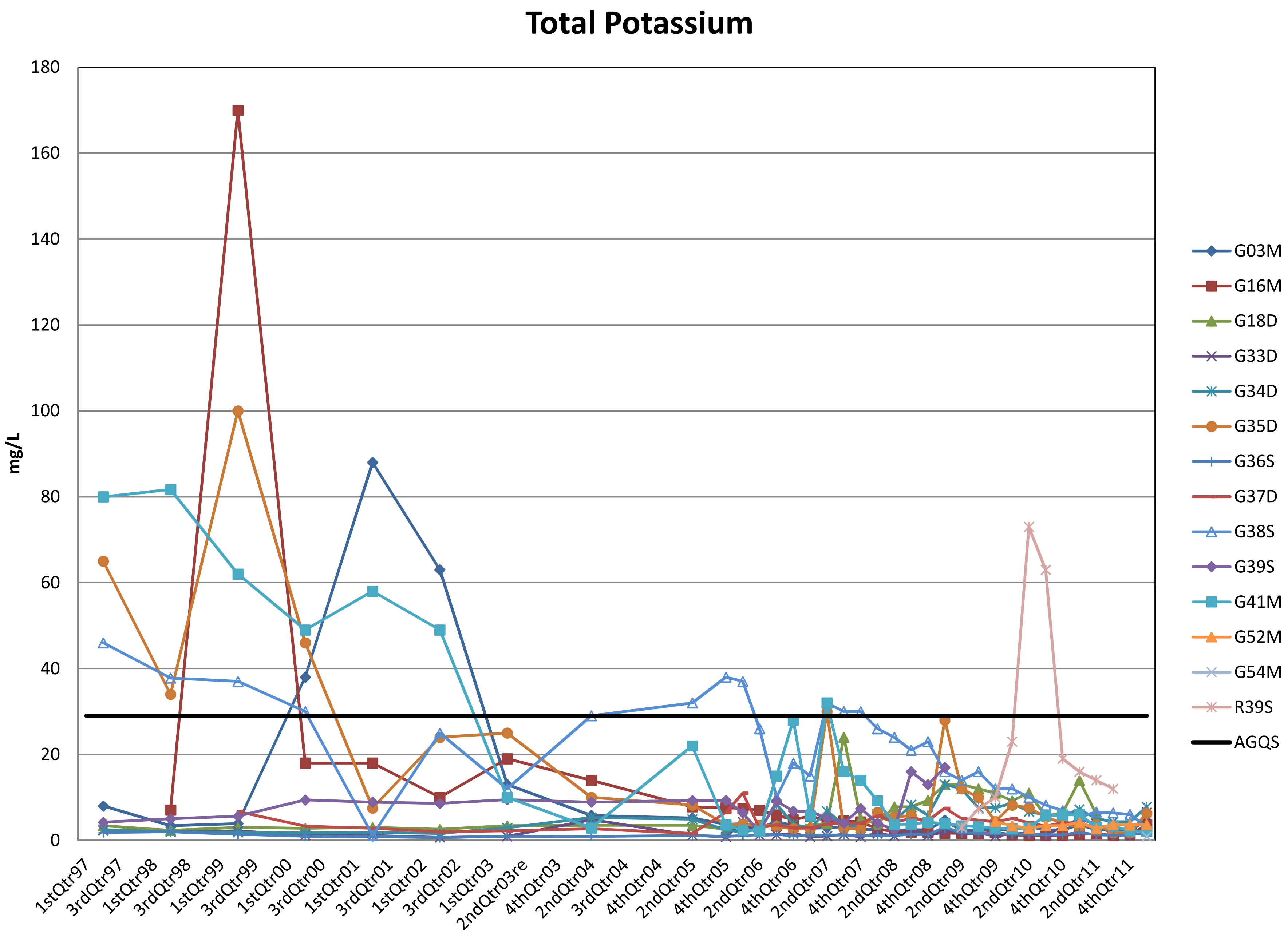


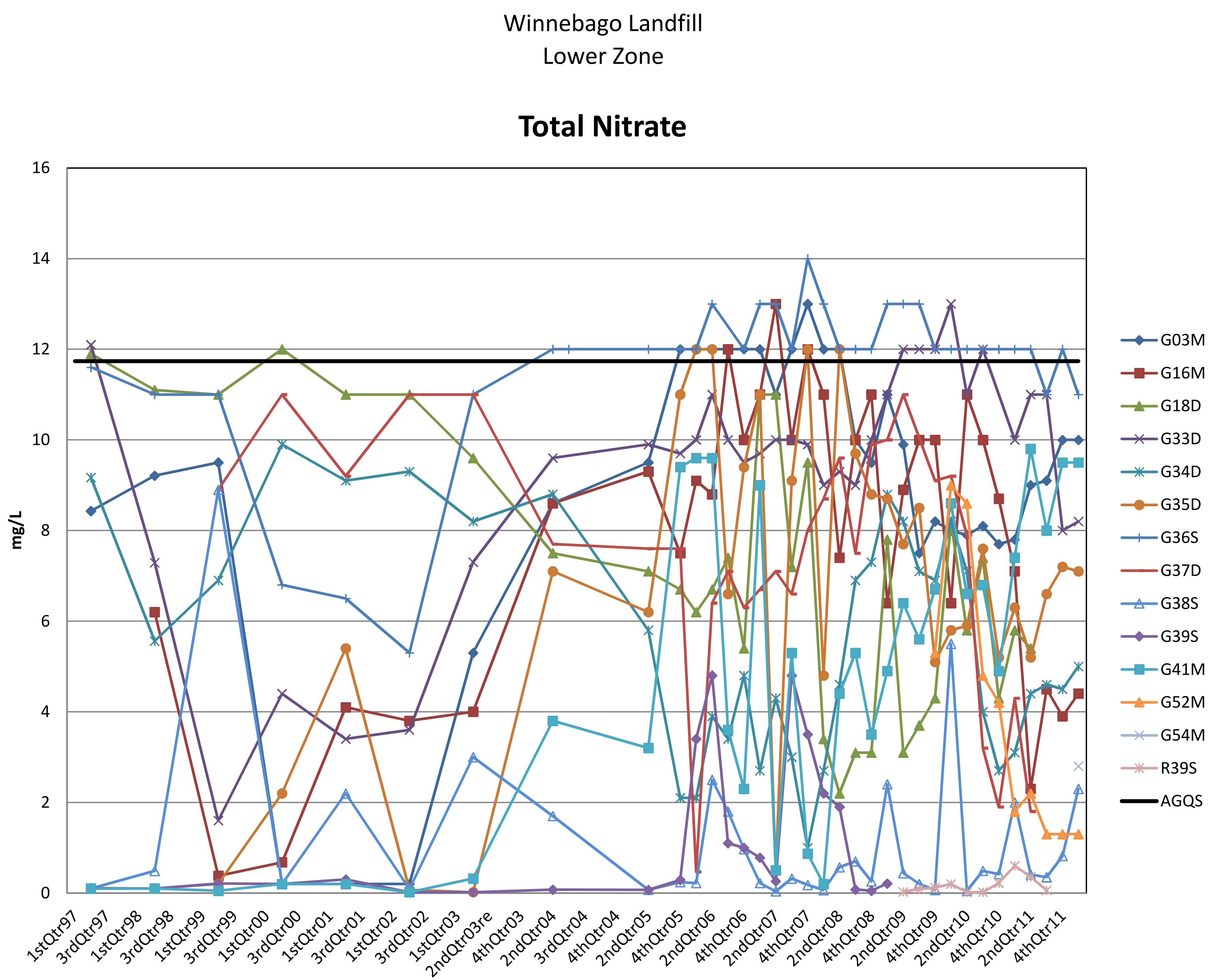
Winnebago Landfill
Lower Zone

Total Sodium



Winnebago Landfill
Lower Zone

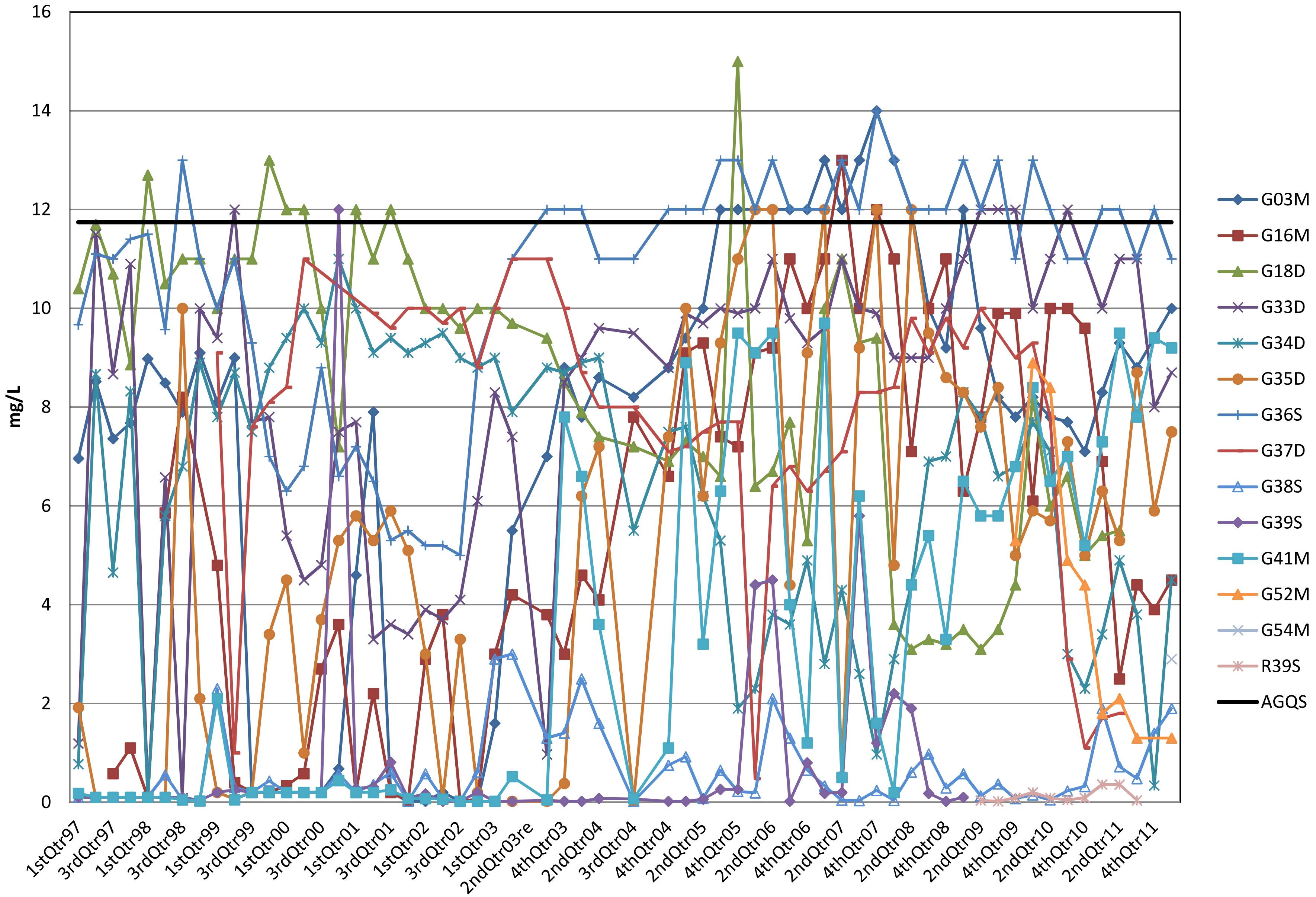




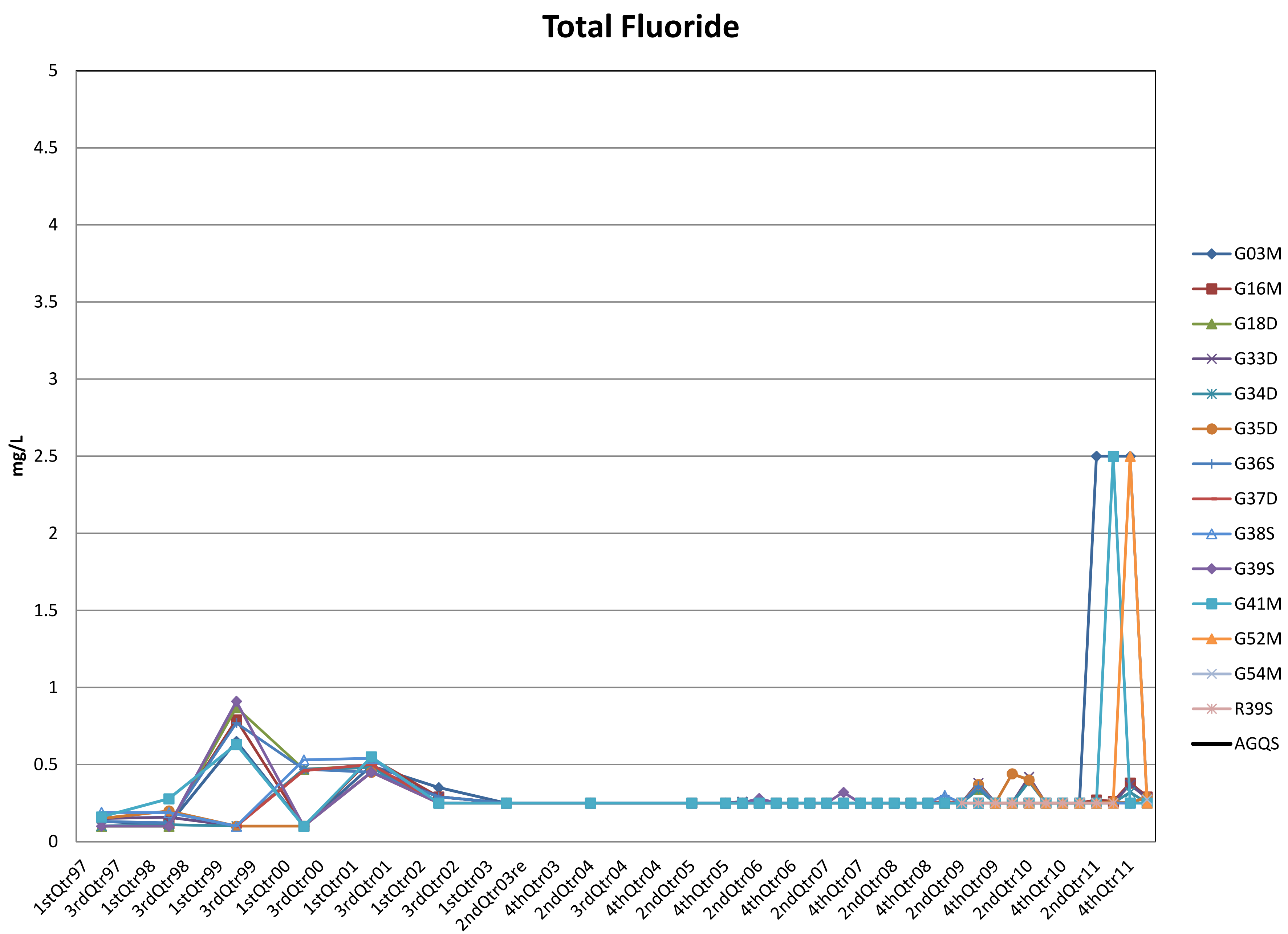
Winnebago Landfill
Lower Zone
Total Nitrate
mg/L
16
14
12
10
8
6
4
2
0
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G03M
G16M
G18D
G33D
G34D
G35D
G36S
G37D
G38S
G39S
G41M
G52M
G54M
R39S
AGQS

Winnebago Landfill
Lower Zone

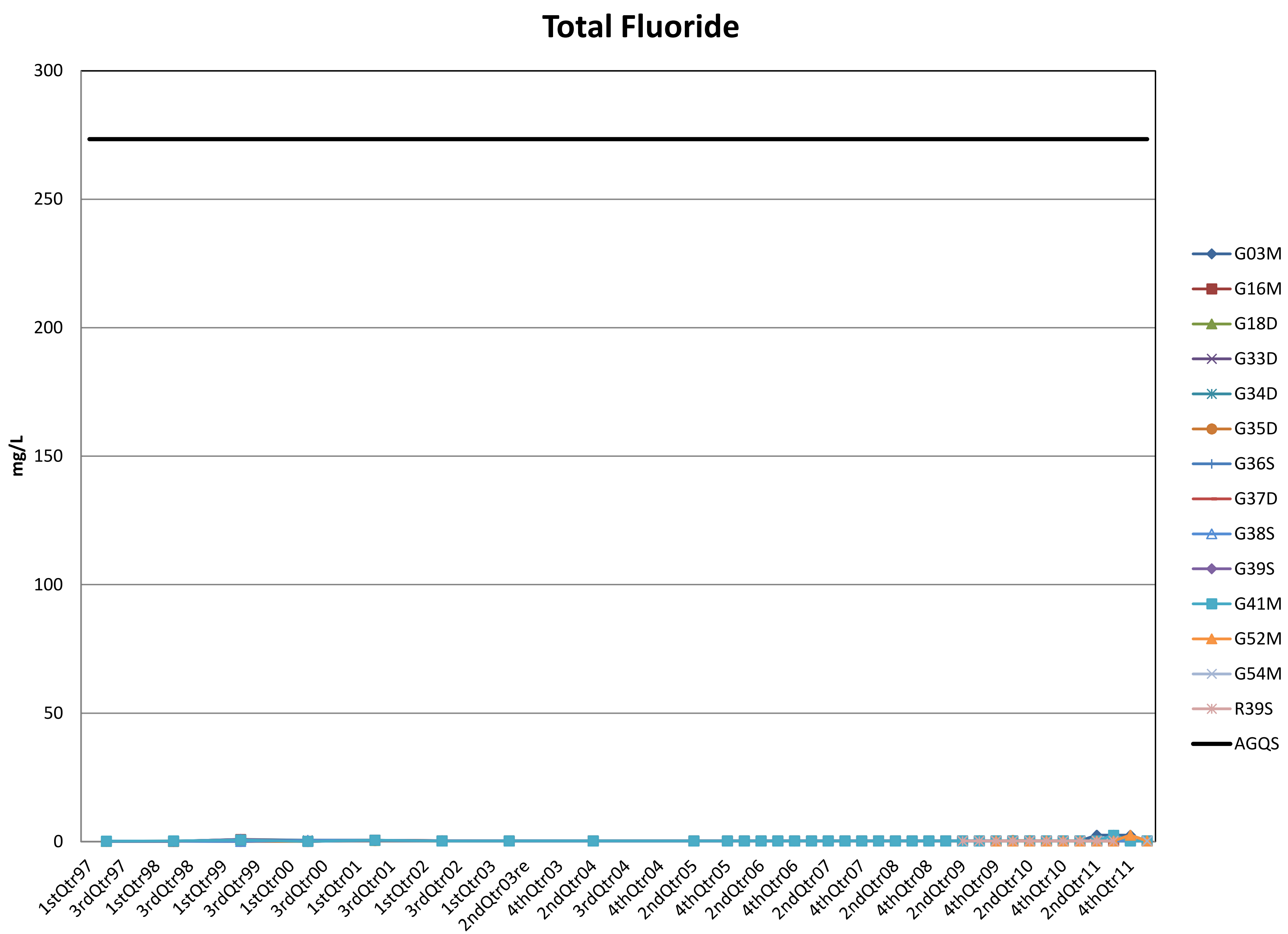
Dissolved Nitrate

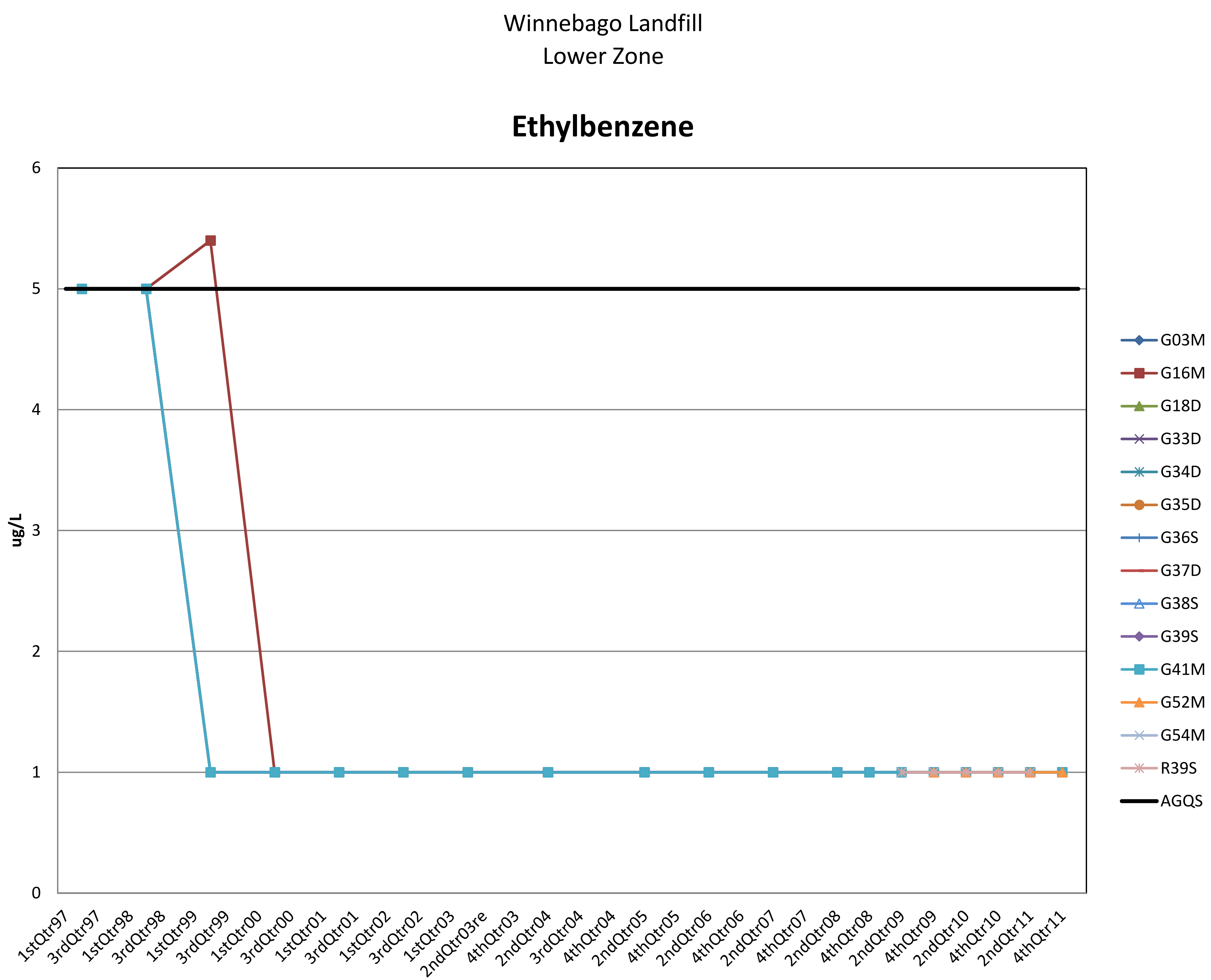


Winnebago Landfill
Lower Zone



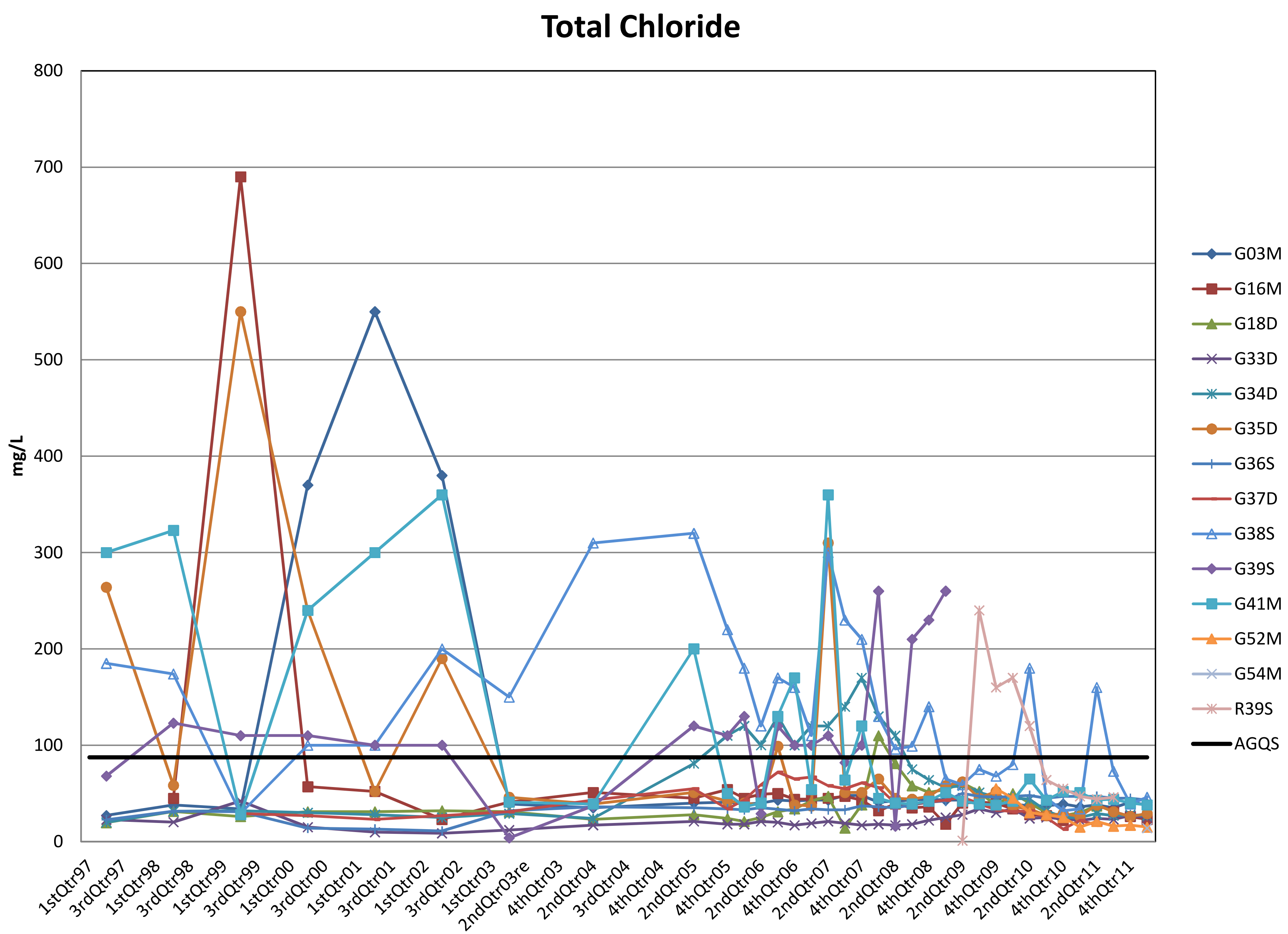
Winnebago Landfill
Lower Zone



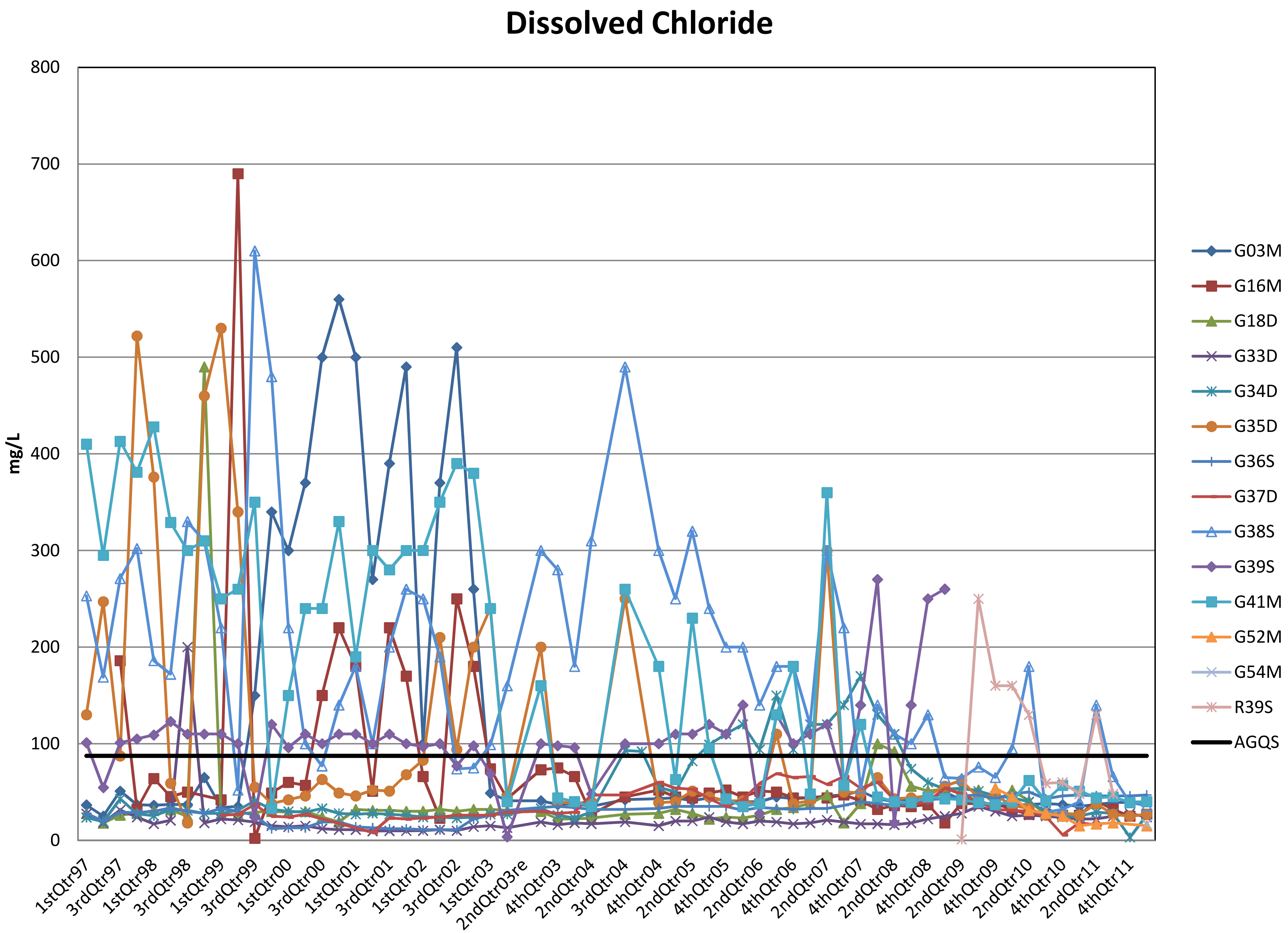


Winnebago Landfill
Lower Zone
Ethylbenzene
ug/L
0
1
2
3
4
5
6
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G03M
G16M
G18D
G33D
G34D
G35D
G36S
G37D
G38S
G39S
G41M
G52M
G54M
R39S
AGQS

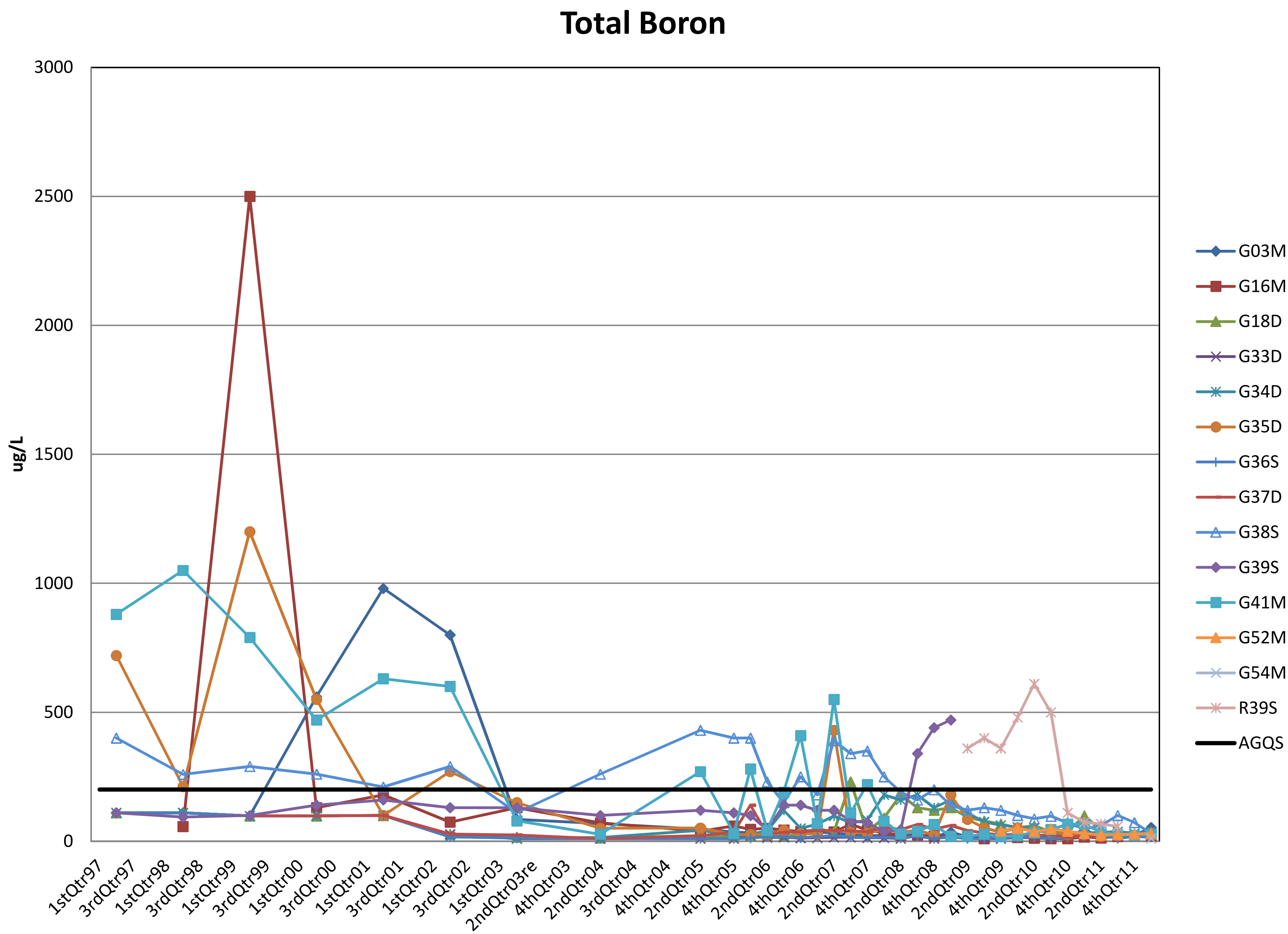
Winnebago Landfill
Lower Zone



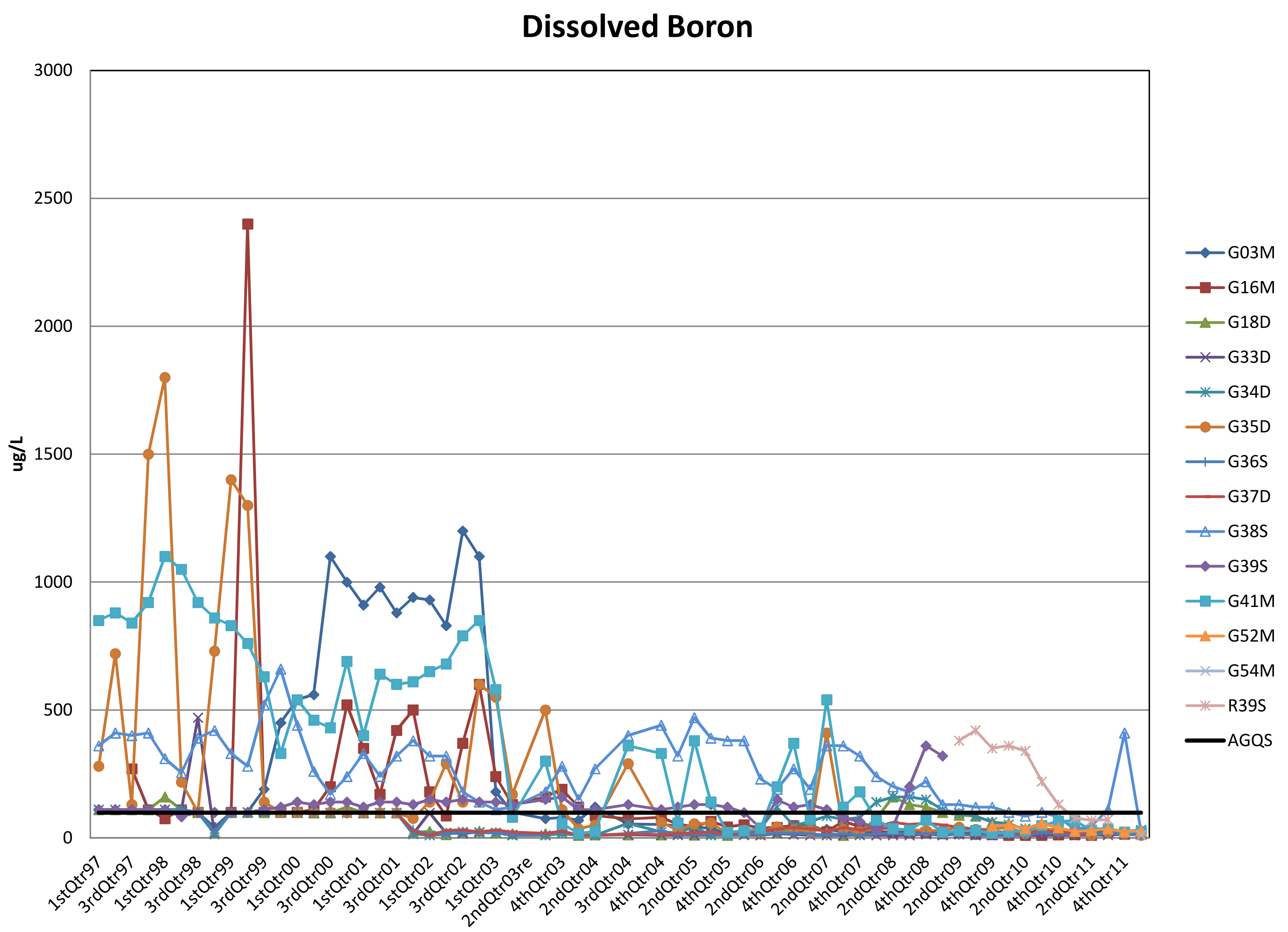
Winnebago Landfill
Lower Zone



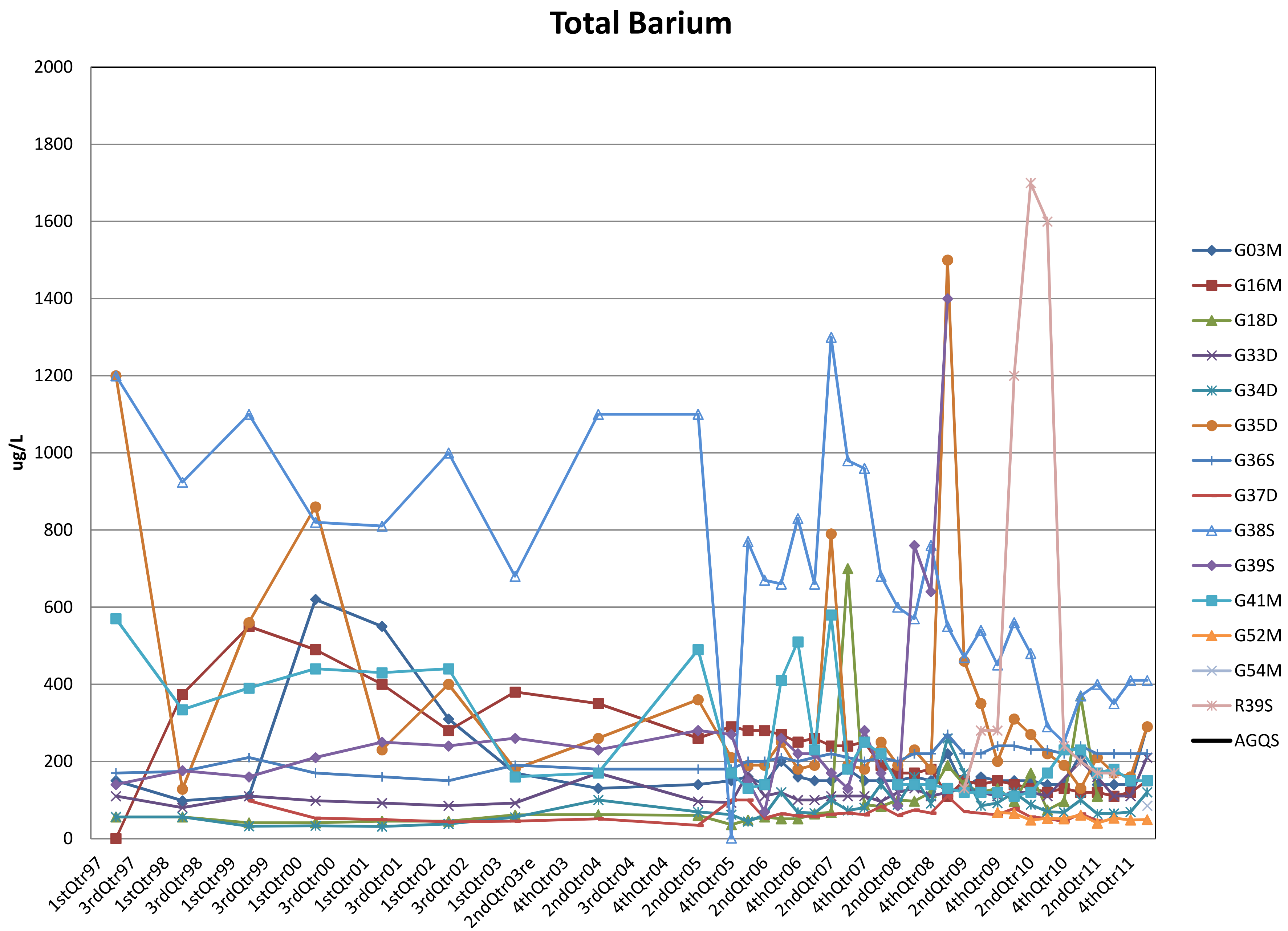
Winnebago Landfill
Lower Zone



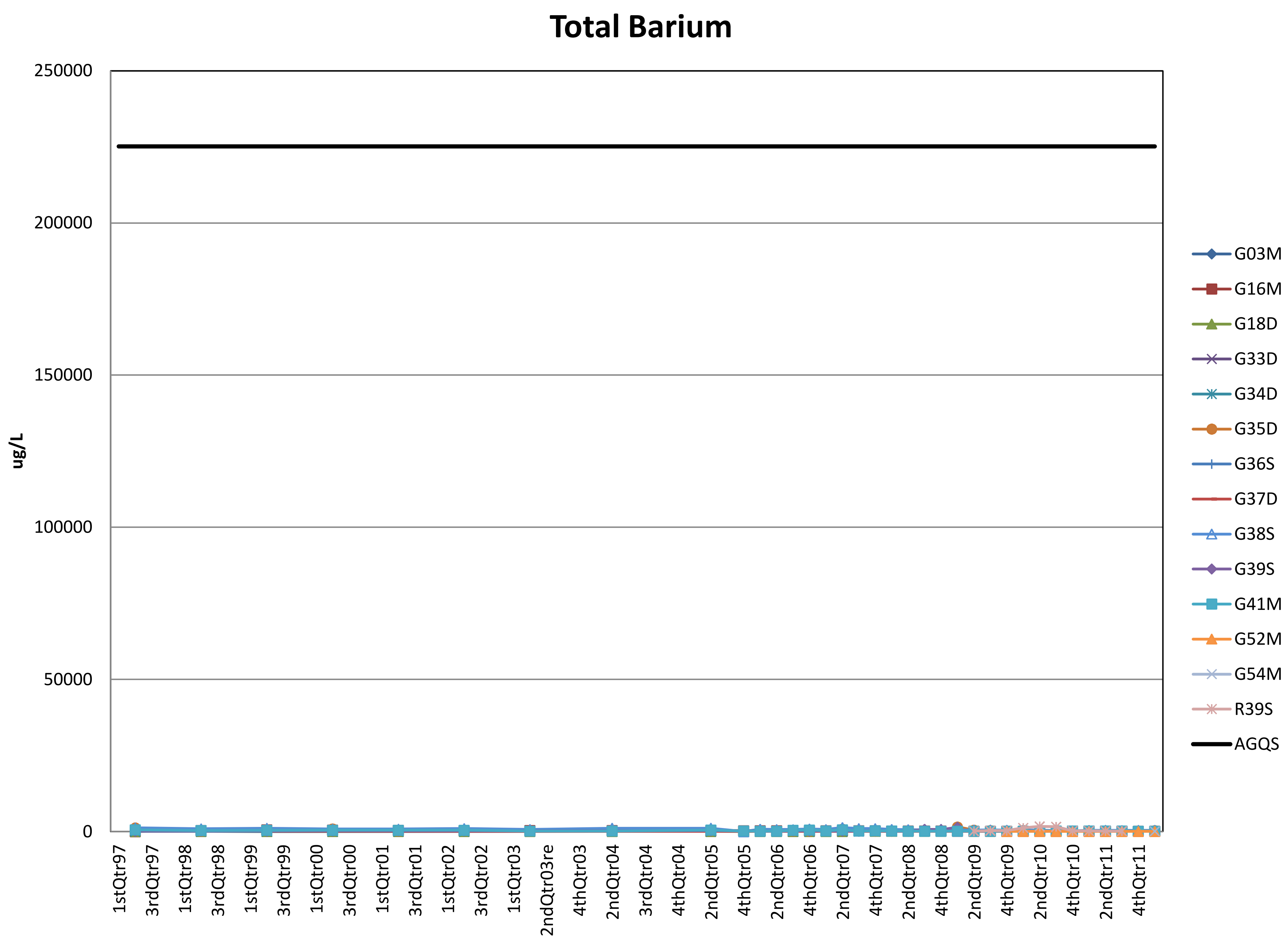
Winnebago Landfill
Lower Zone



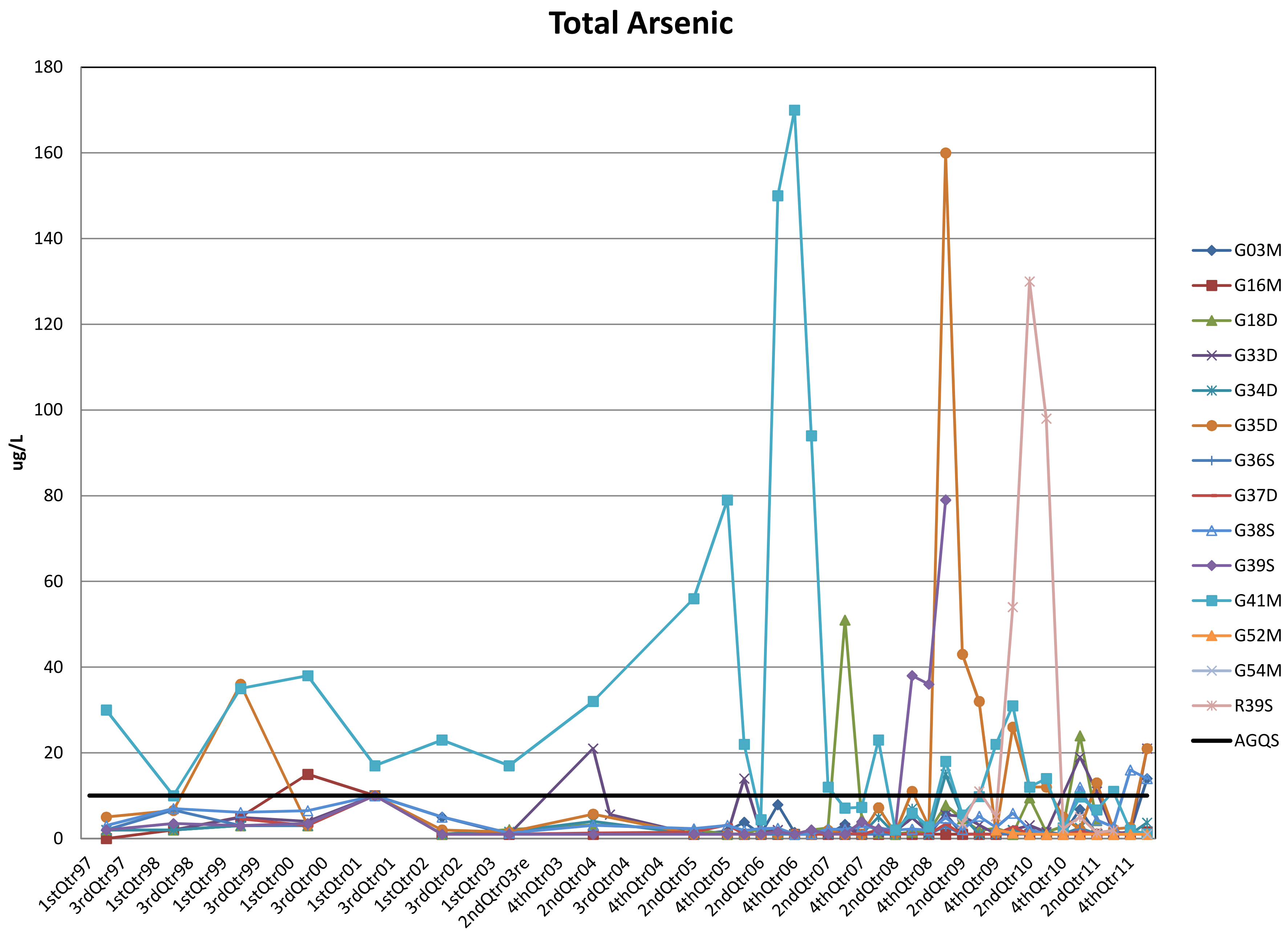
Winnebago Landfill
Lower Zone



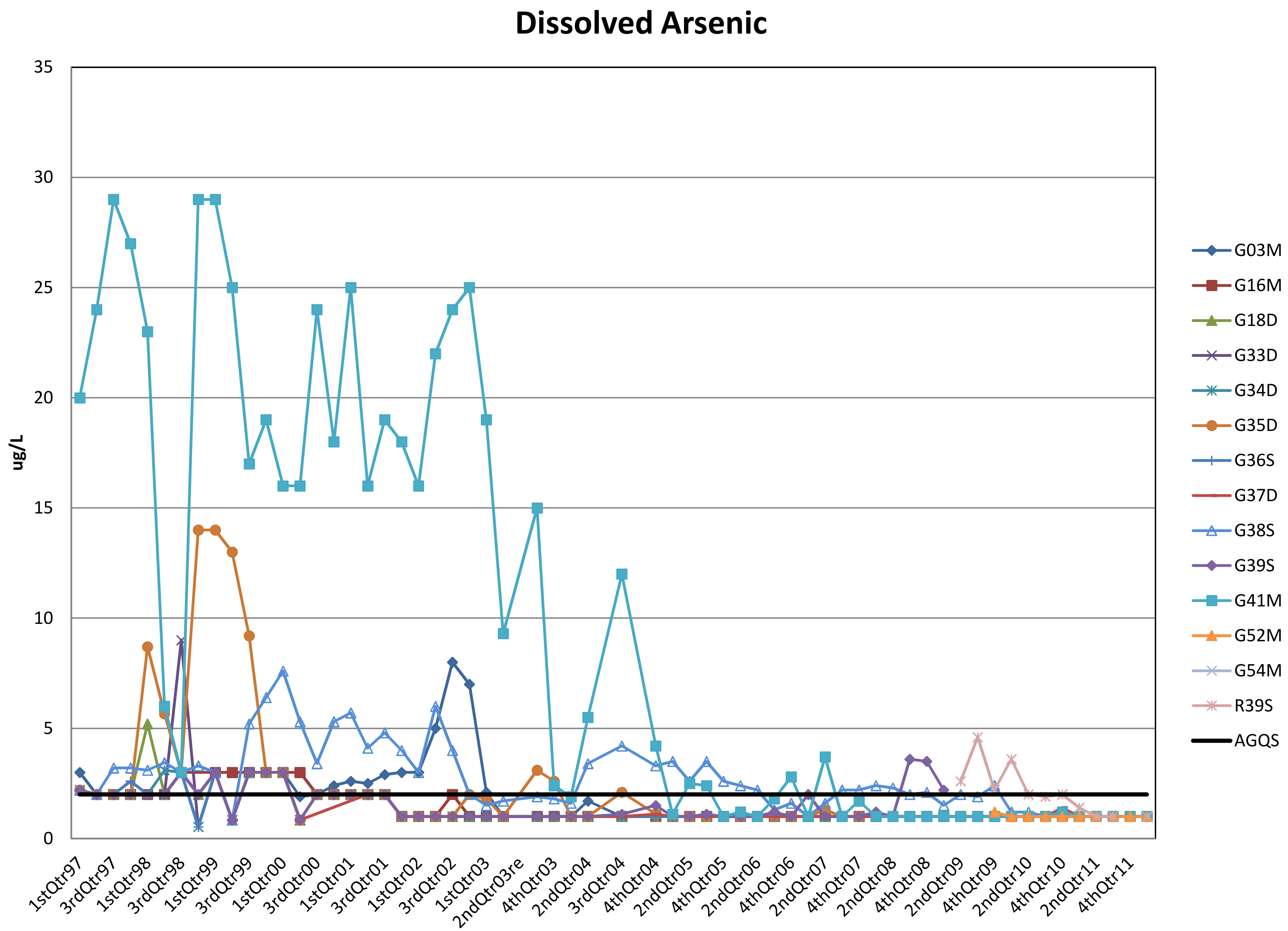
Winnebago Landfill
Lower Zone



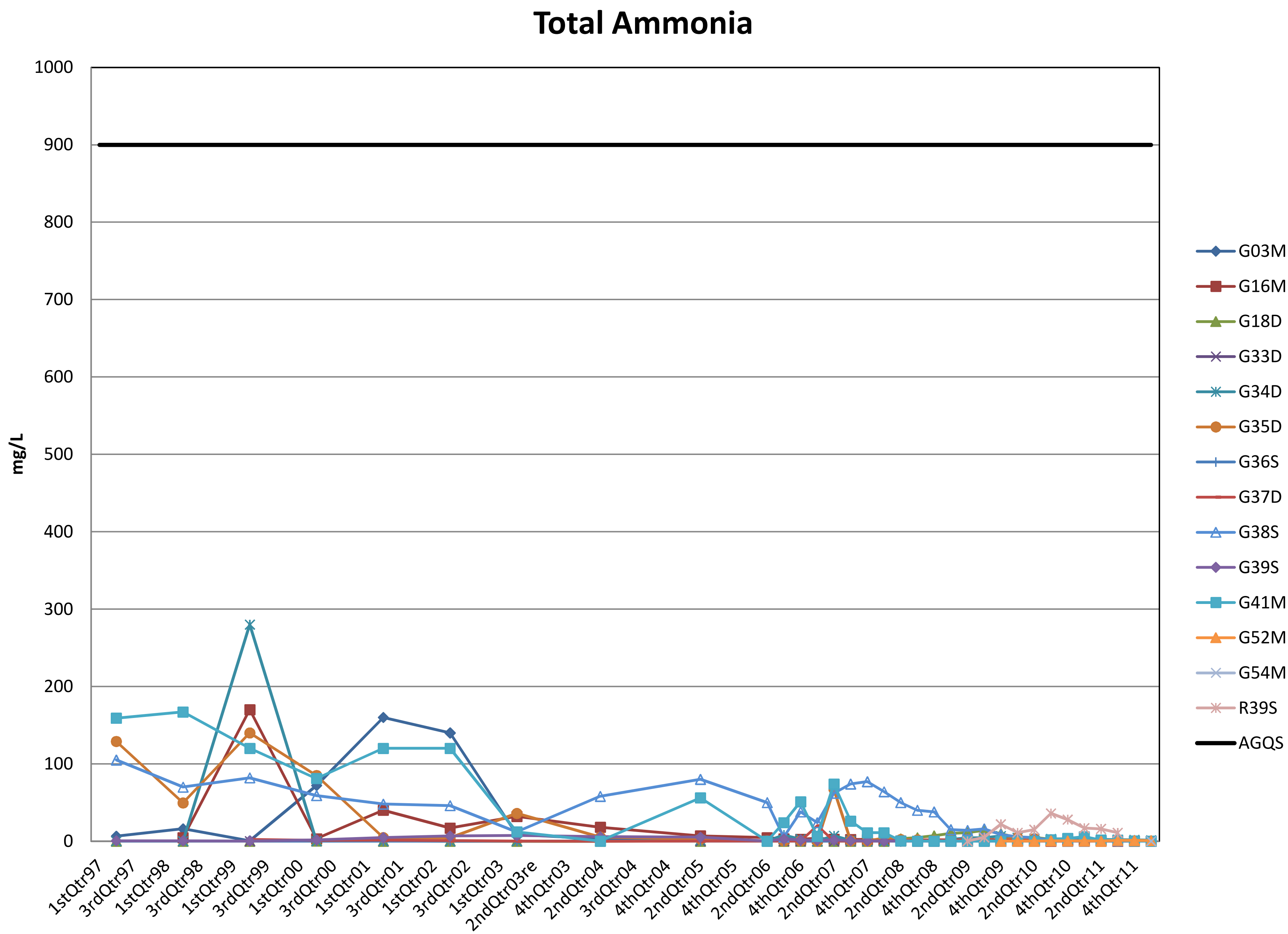
Winnebago Landfill
Lower Zone

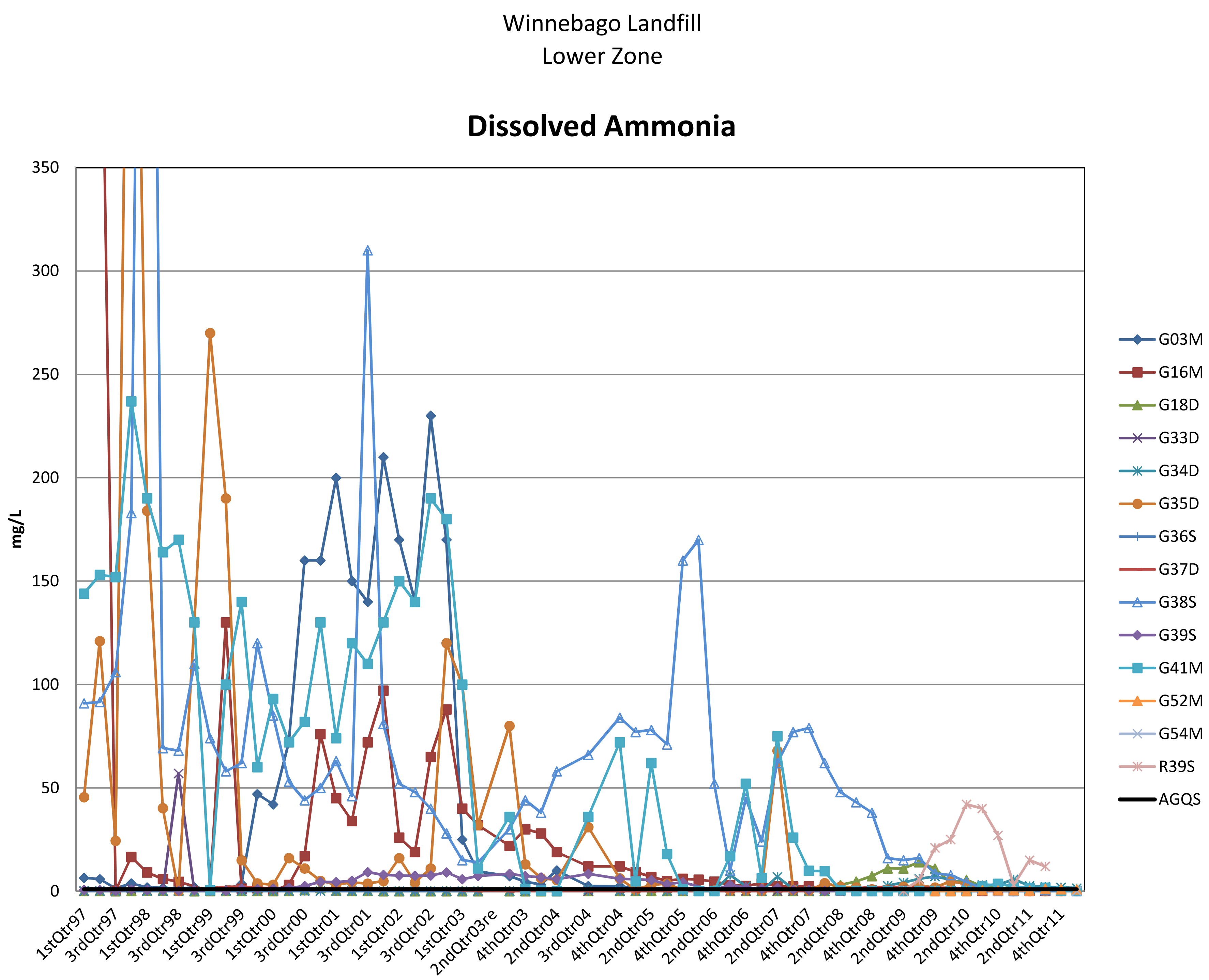


Winnebago Landfill
Lower Zone



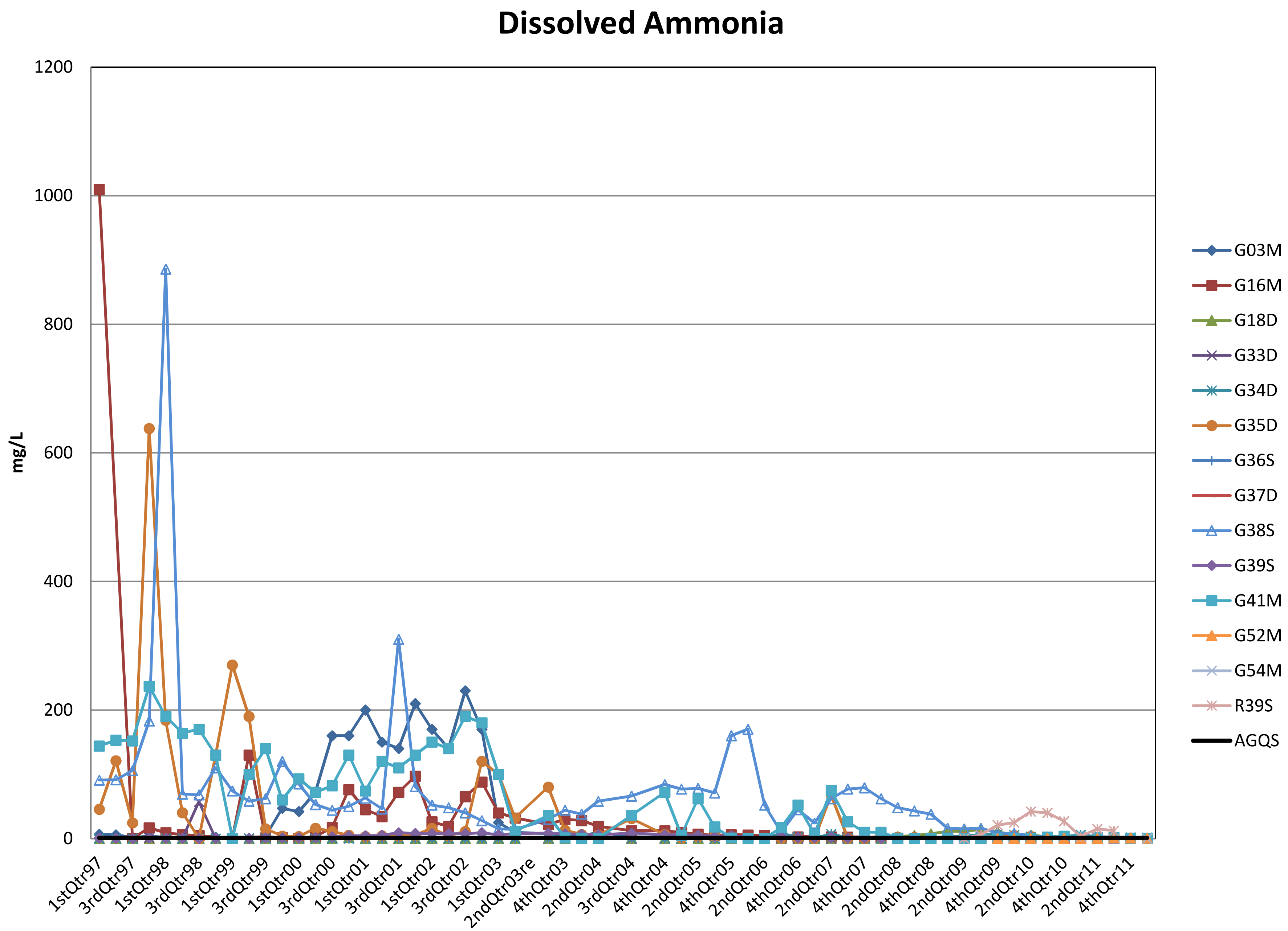
Winnebago Landfill
Lower Zone



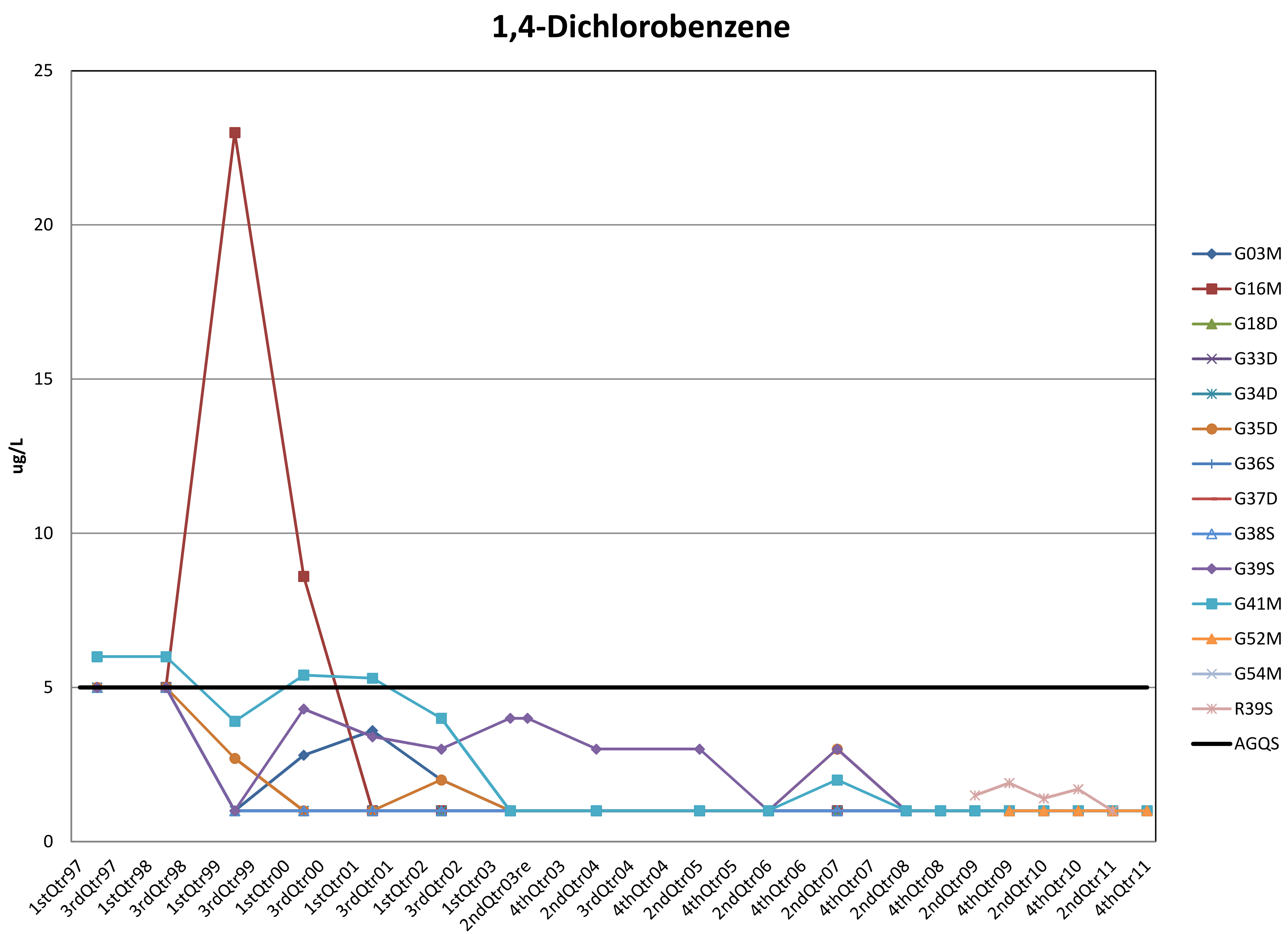


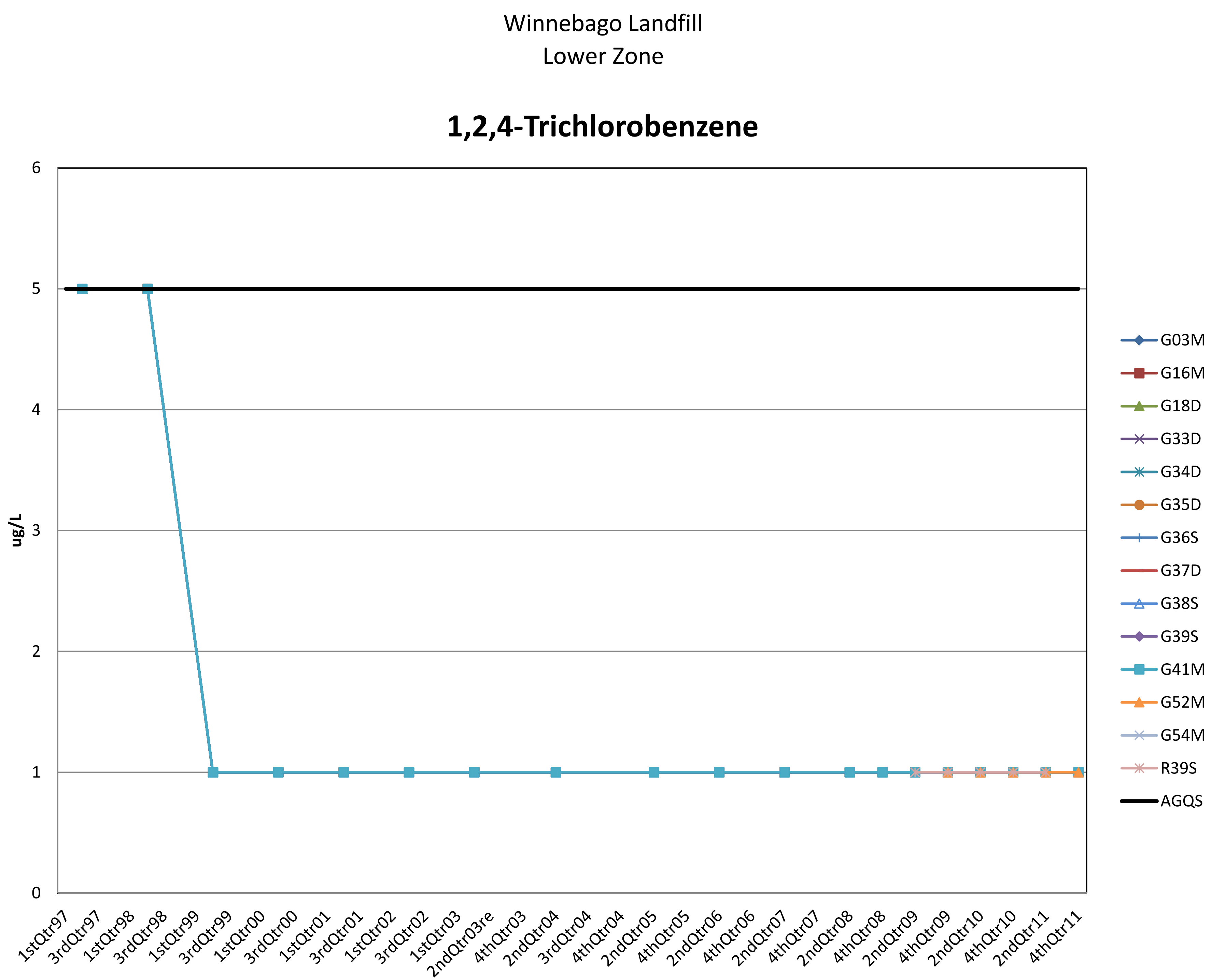
Winnebago Landfill
Lower Zone
Dissolved Ammonia
mg/L
350
300
250
200
150
100
50
0
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G03M
G16M
G18D
G33D
G34D
G35D
G36S
G37D
G38S
G39S
G41M
G52M
G54M
R39S
AGQS

Winnebago Landfill
Lower Zone



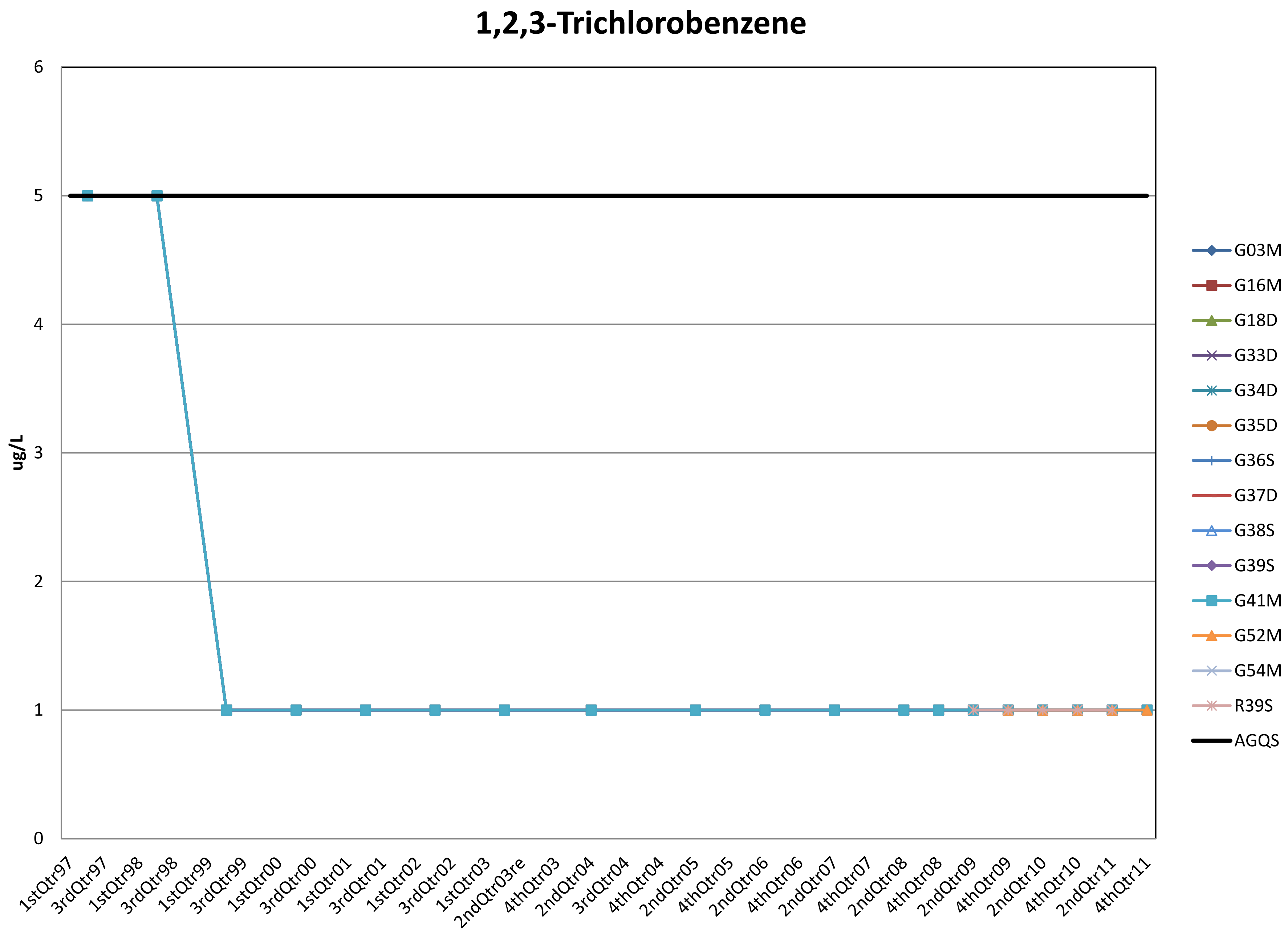
Winnebago Landfill
Lower Zone





Winnebago Landfill
Lower Zone
1,2,4-Trichlorobenzene
ug/L
0
1
2
3
4
5
6
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G03M
G16M
G18D
G33D
G34D
G35D
G36S
G37D
G38S
G39S
G41M
G52M
G54M
R39S
AGQS

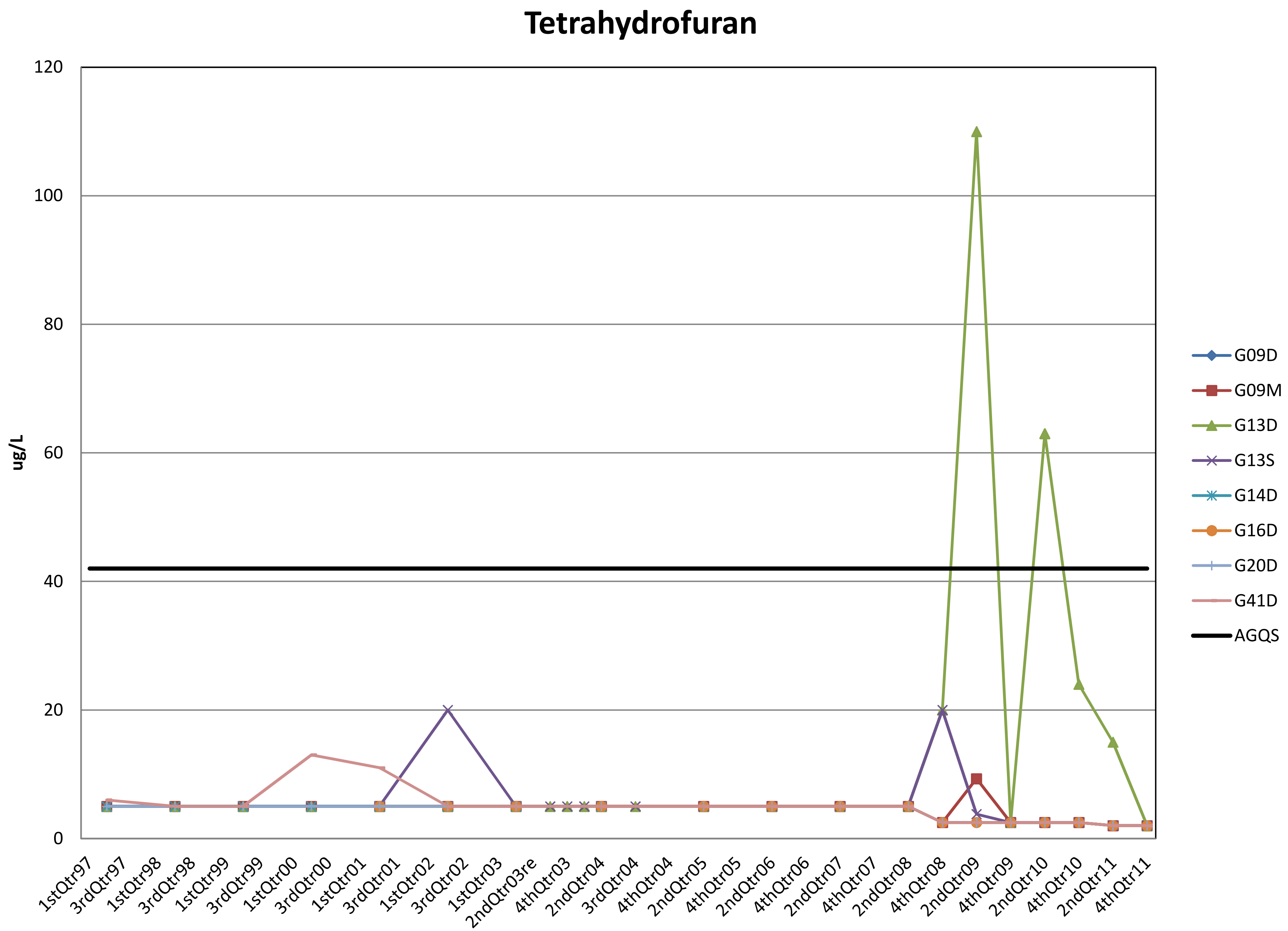
Winnebago Landfill
Lower Zone



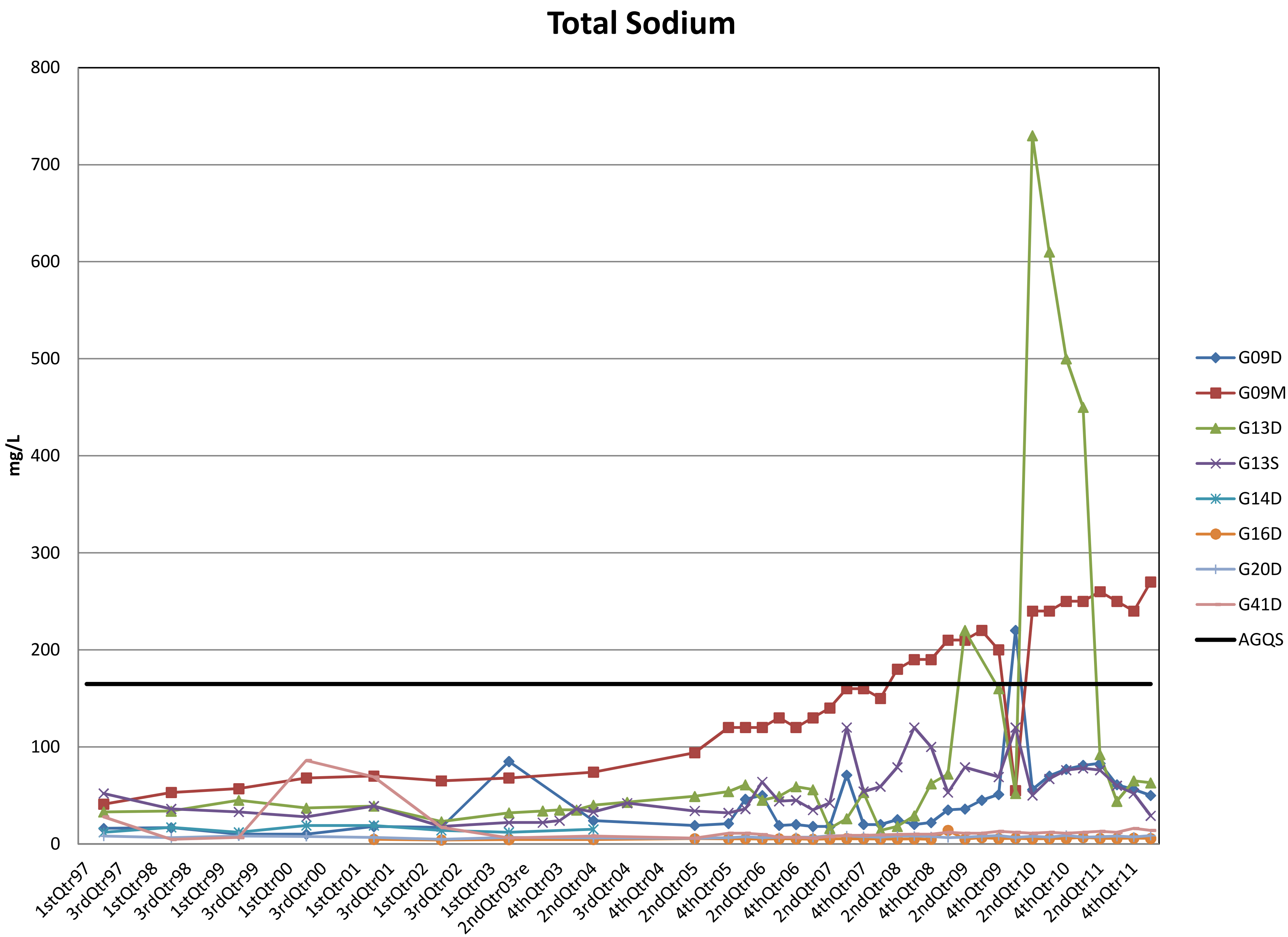
APPENDIX F

Bedrock Zone Trend Graphs

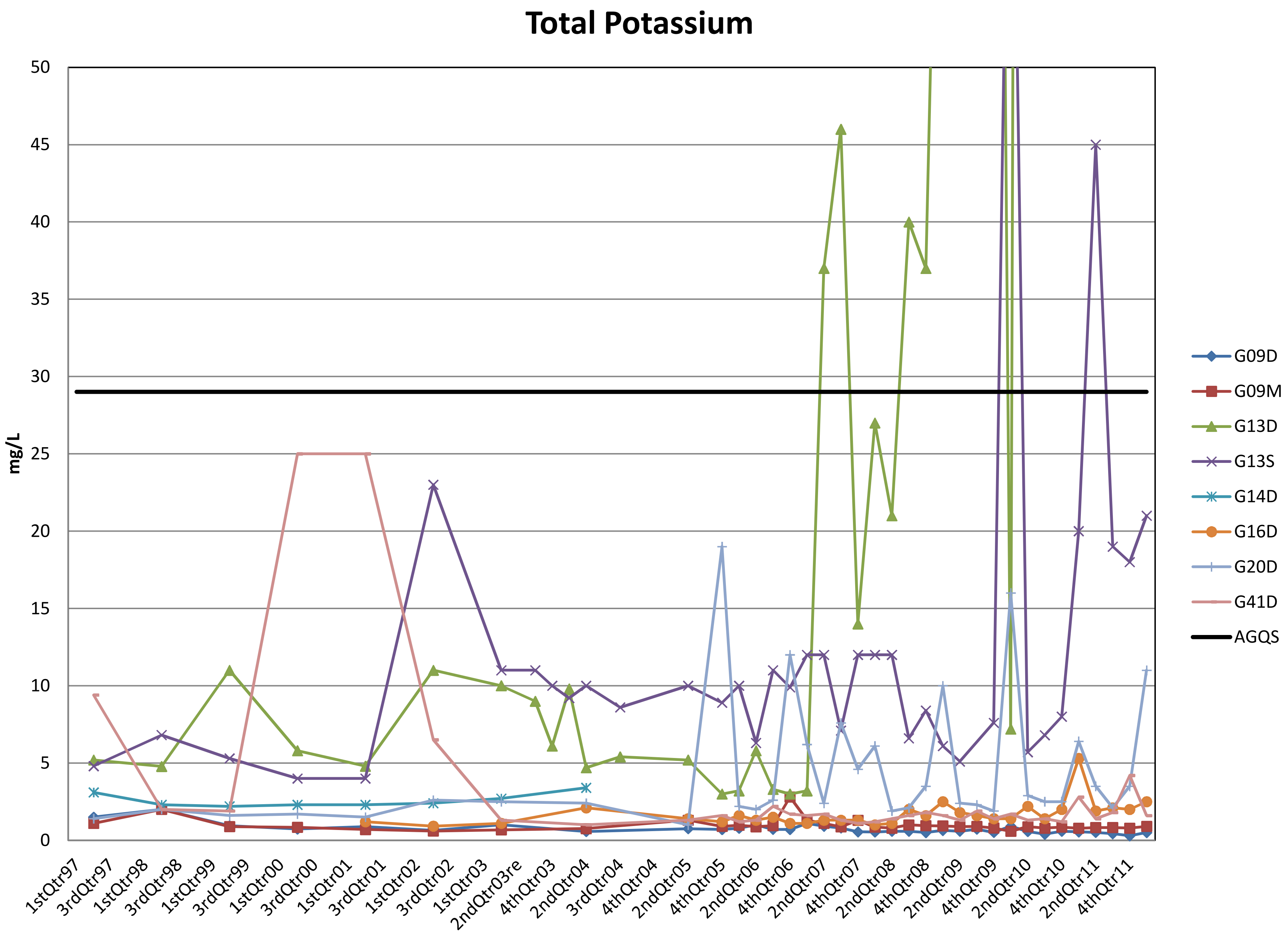
Winnebago Landfill
Bedrock Zone



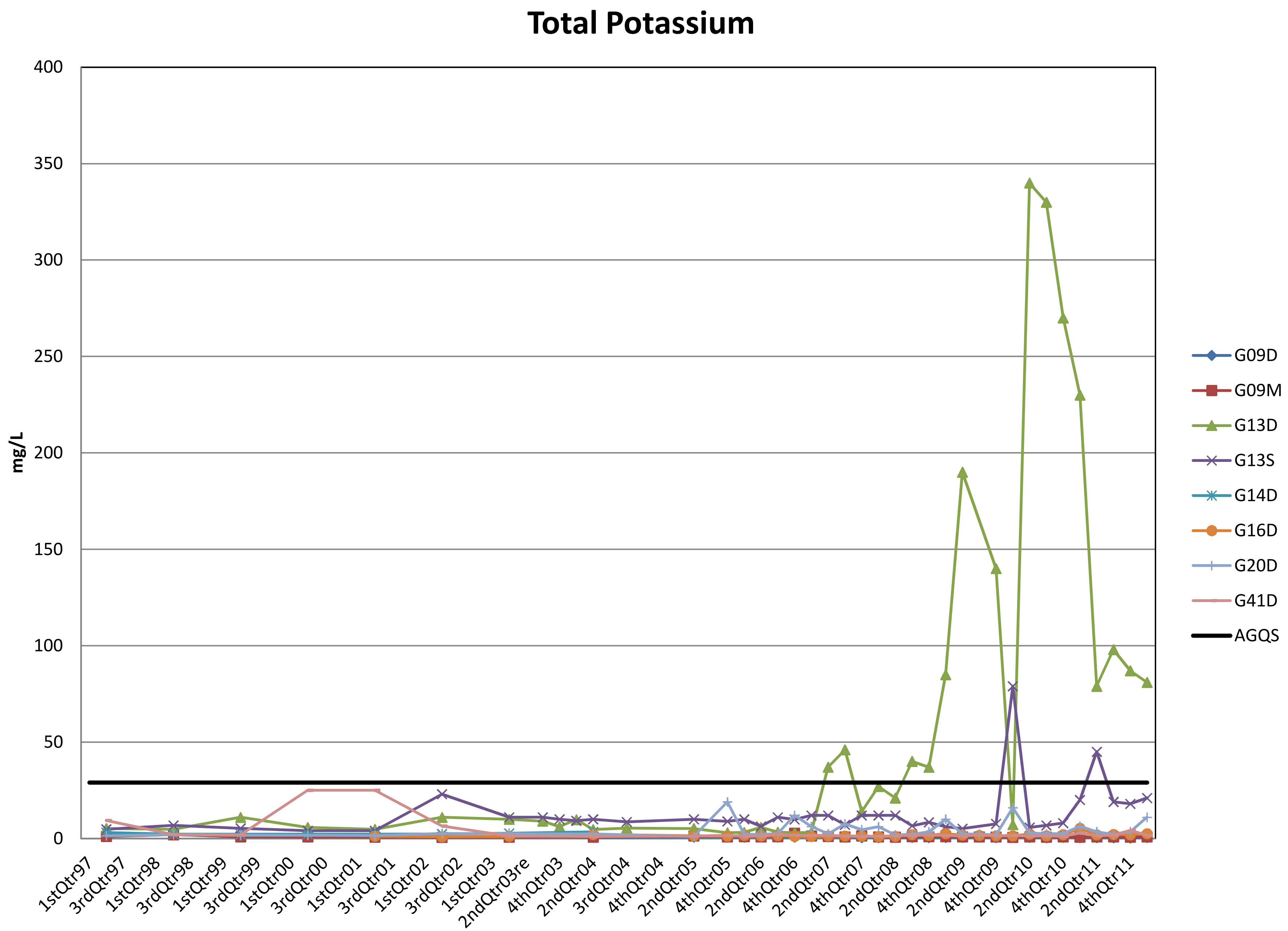
Winnebago Landfill
Bedrock Zone

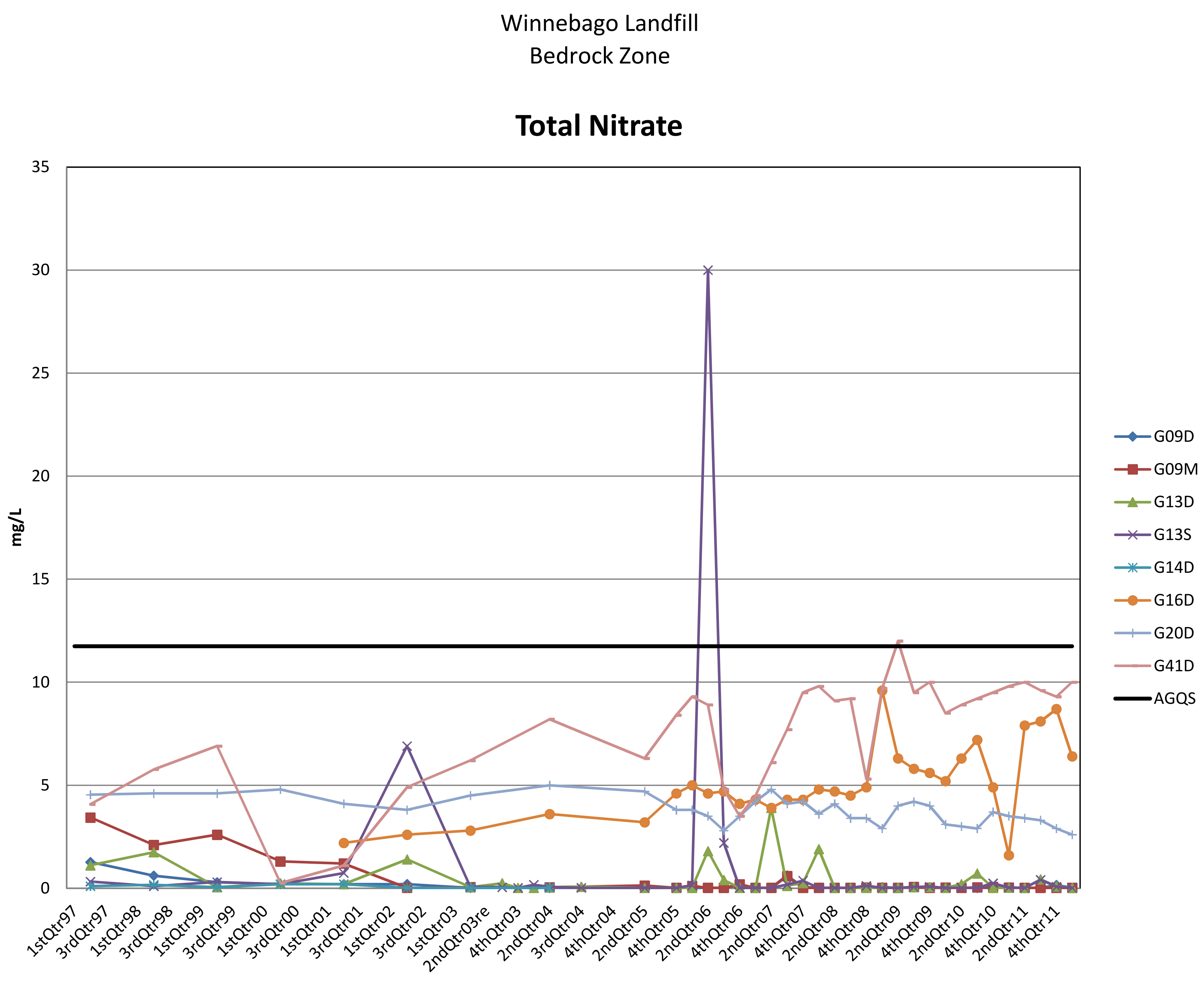


Winnebago Landfill
Bedrock Zone

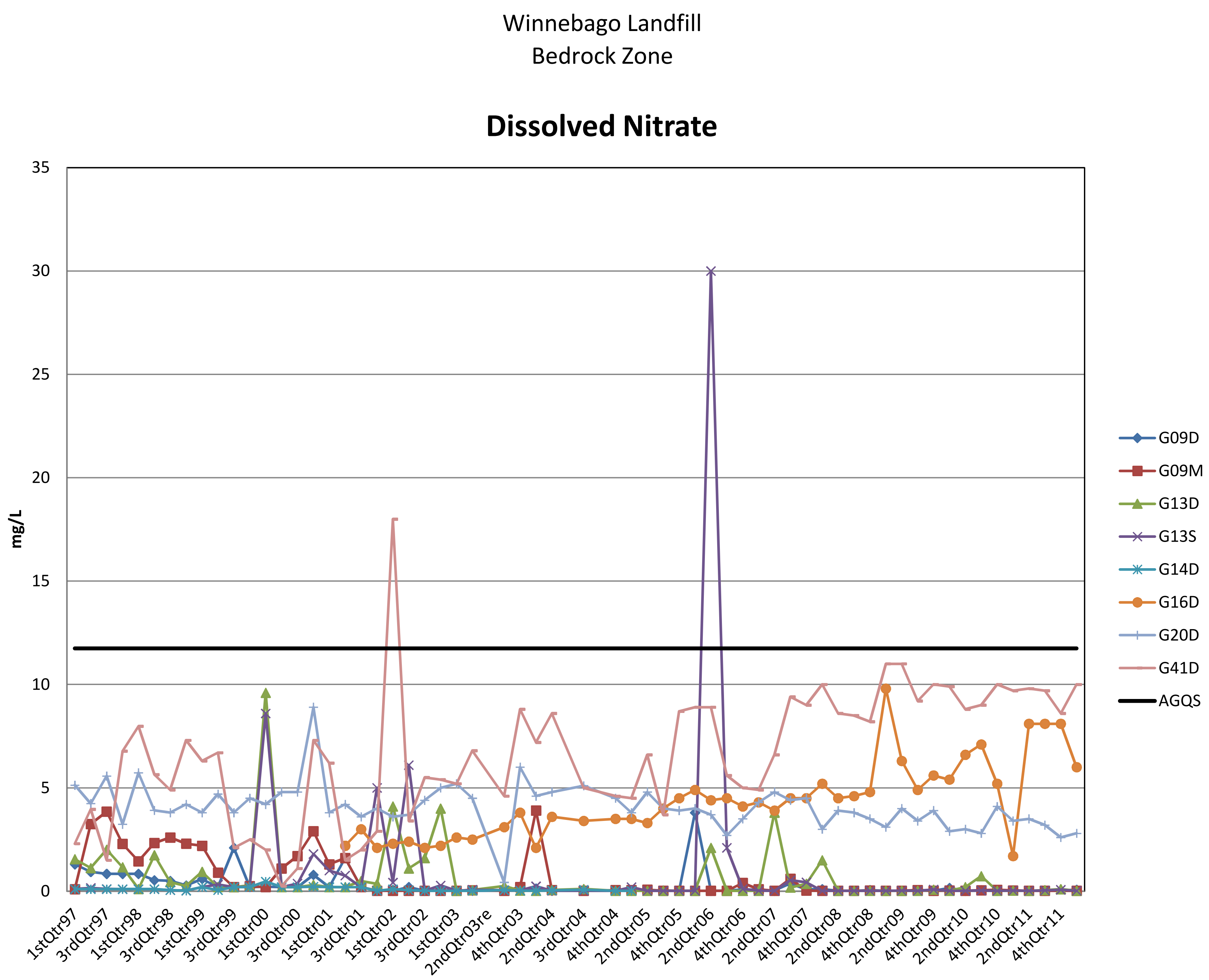


Winnebago Landfill
Bedrock Zone





Winnebago Landfill
Bedrock Zone
Total Nitrate
mg/L
35
30
25
20
15
10
5
0
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
2ndQtr03re
4thQtr03
2ndQtr04
3rdQtr04
4thQtr04
2ndQtr05
4thQtr05
2ndQtr06
4thQtr06
2ndQtr07
4thQtr07
2ndQtr08
4thQtr08
2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G09D
G09M
G13D
G13S
G14D
G16D
G20D
G41D
AGQS



Winnebago Landfill
Bedrock Zone
Dissolved Nitrate
mg/L
35
30
25
20
15
10
5
0
1stQtr97
3rdQtr97
1stQtr98
3rdQtr98
1stQtr99
3rdQtr99
1stQtr00
3rdQtr00
1stQtr01
3rdQtr01
1stQtr02
3rdQtr02
1stQtr03
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2ndQtr06
4thQtr06
2ndQtr07
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2ndQtr09
4thQtr09
2ndQtr10
4thQtr10
2ndQtr11
4thQtr11
G09D
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G13D
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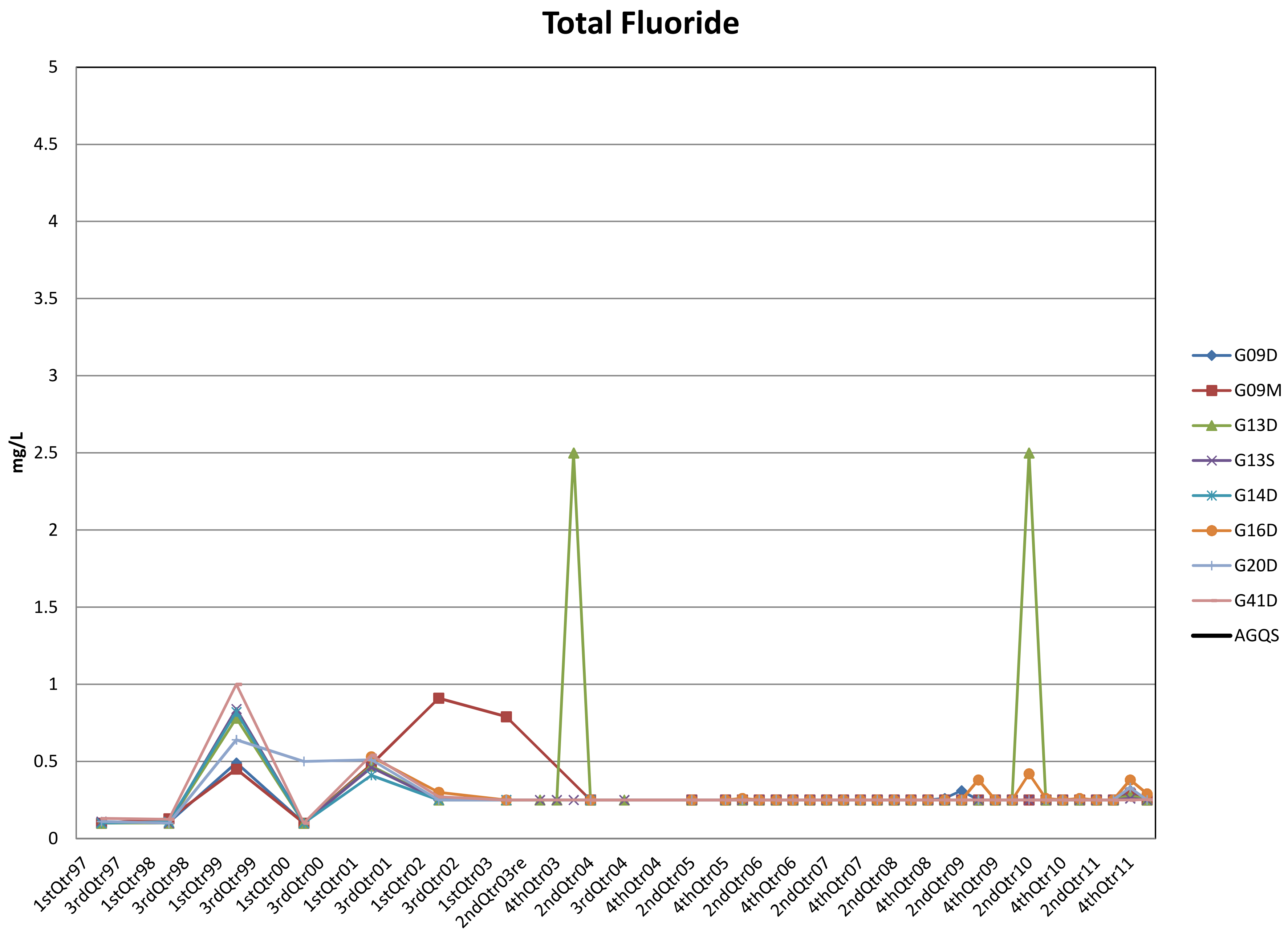
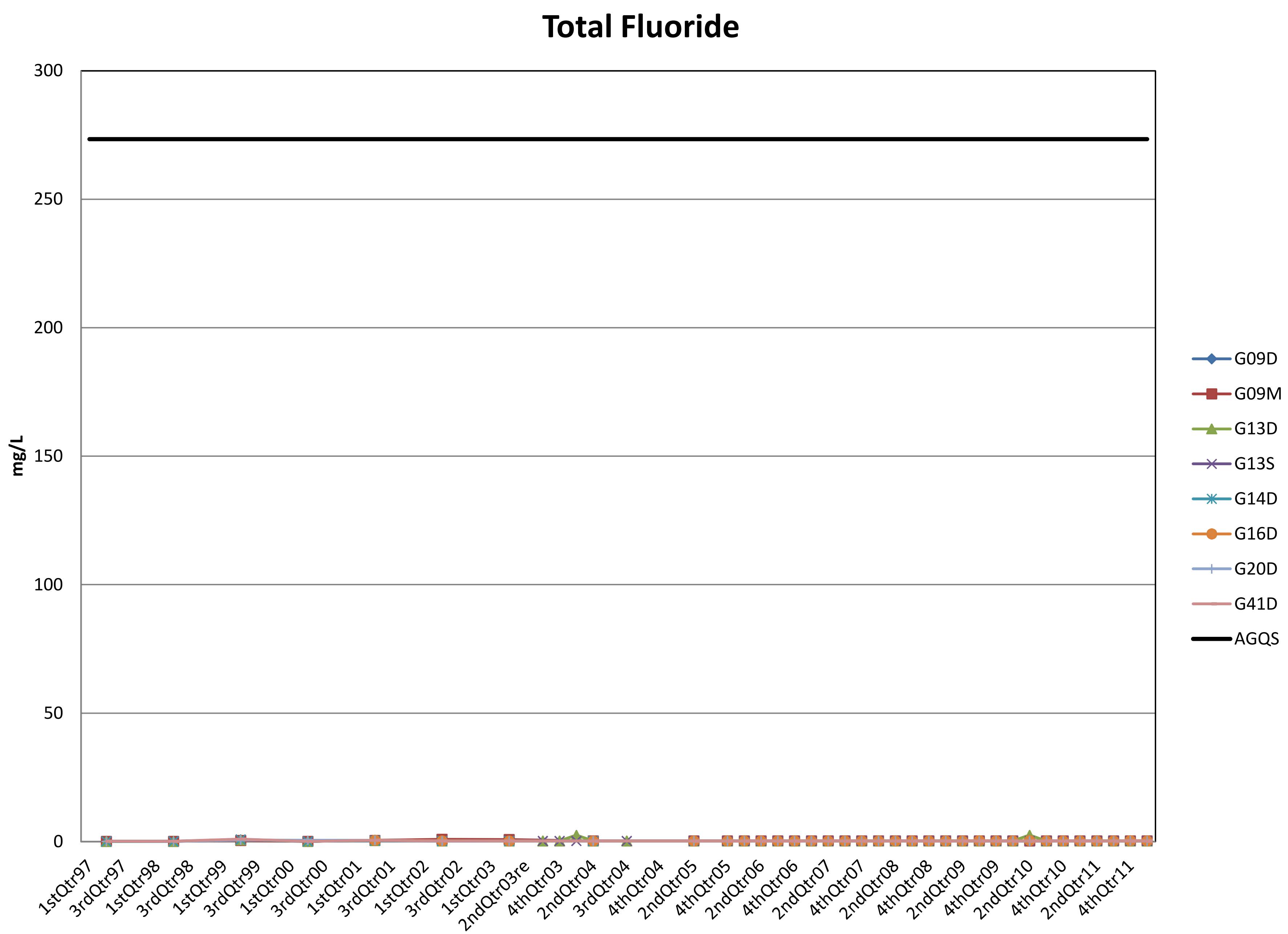
G16D
G20D
G41D
AGQS

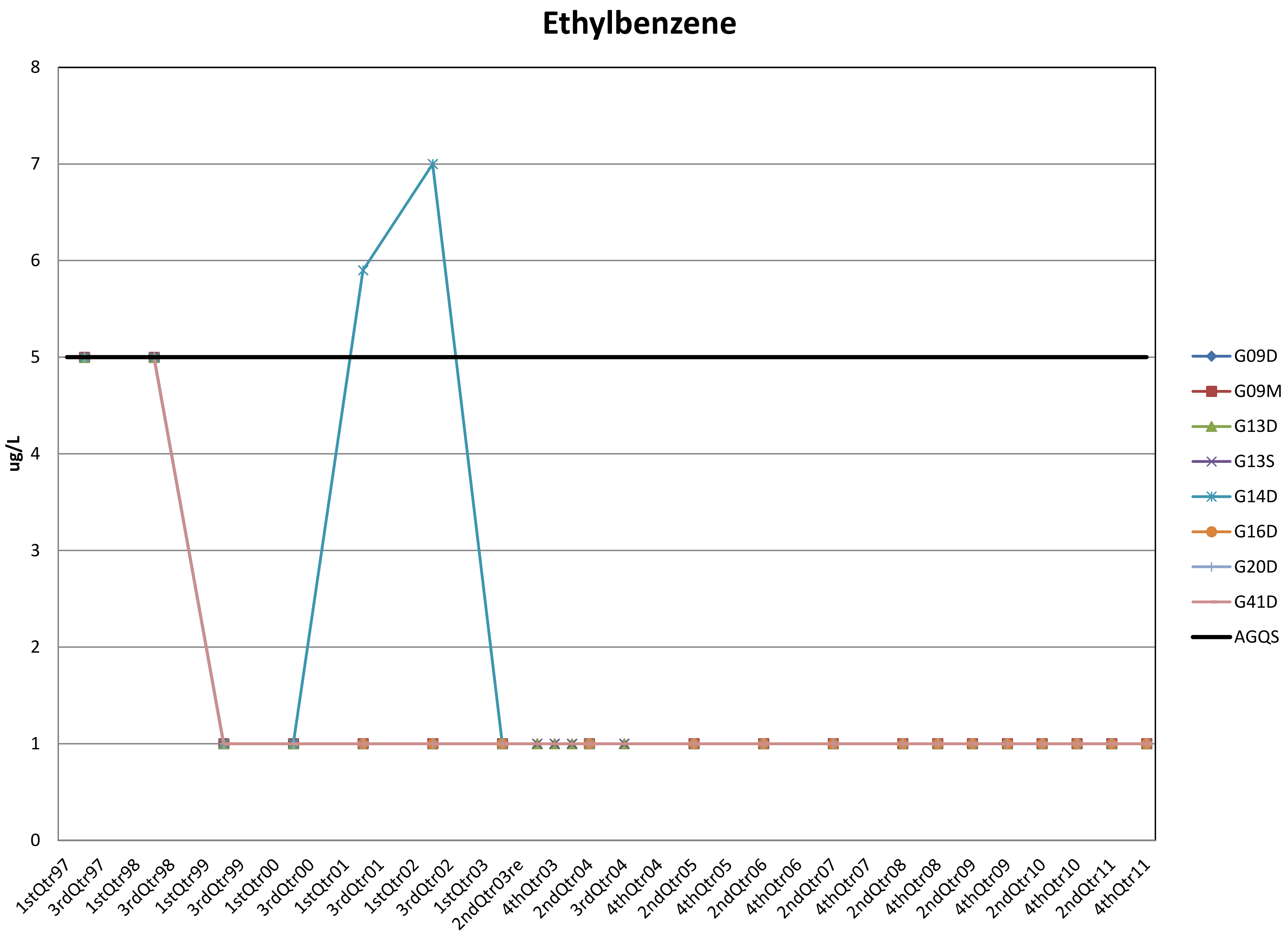
Winnebago Landfill
Bedrock Zone



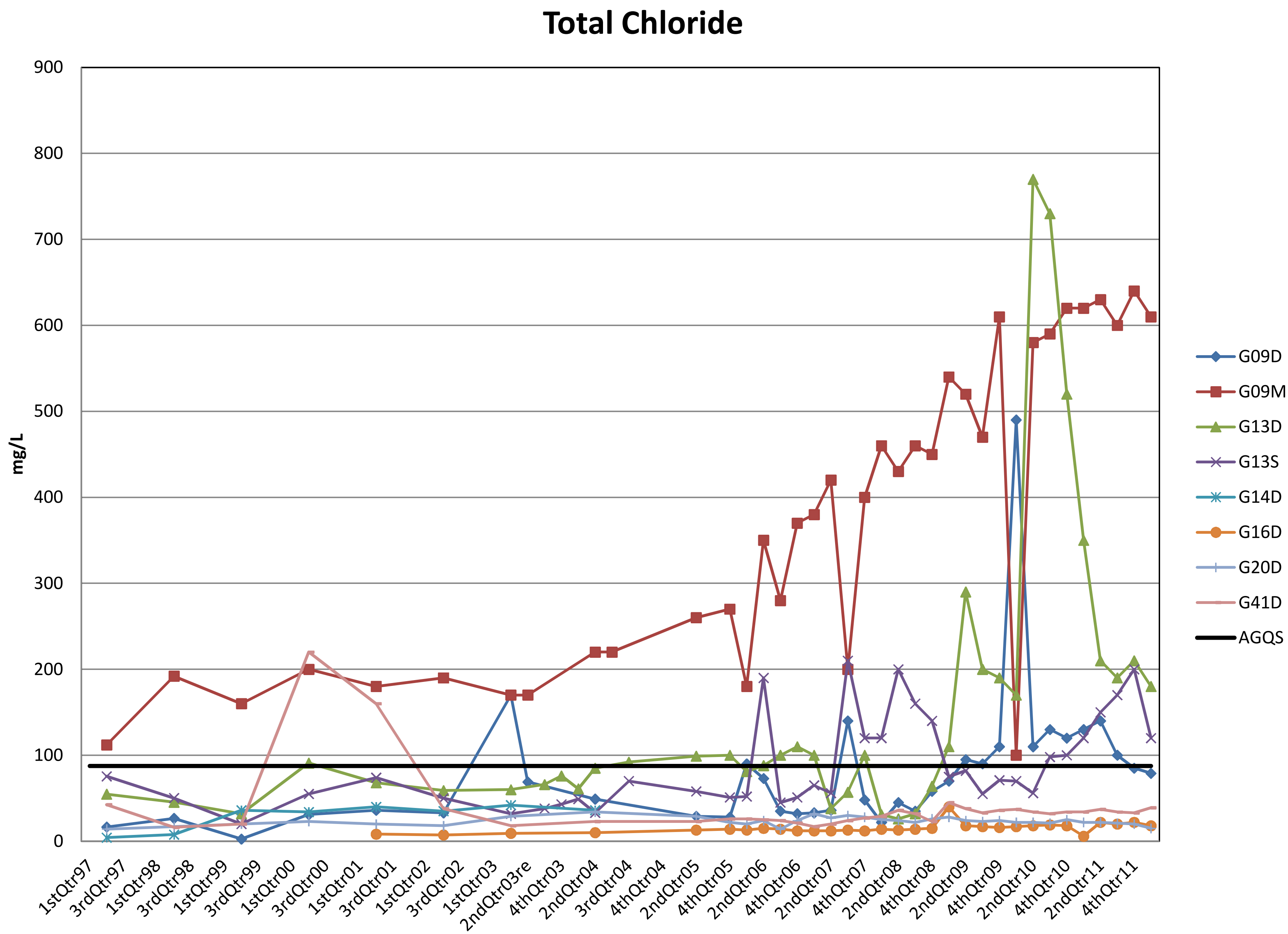
Winnebago Landfill
Bedrock Zone



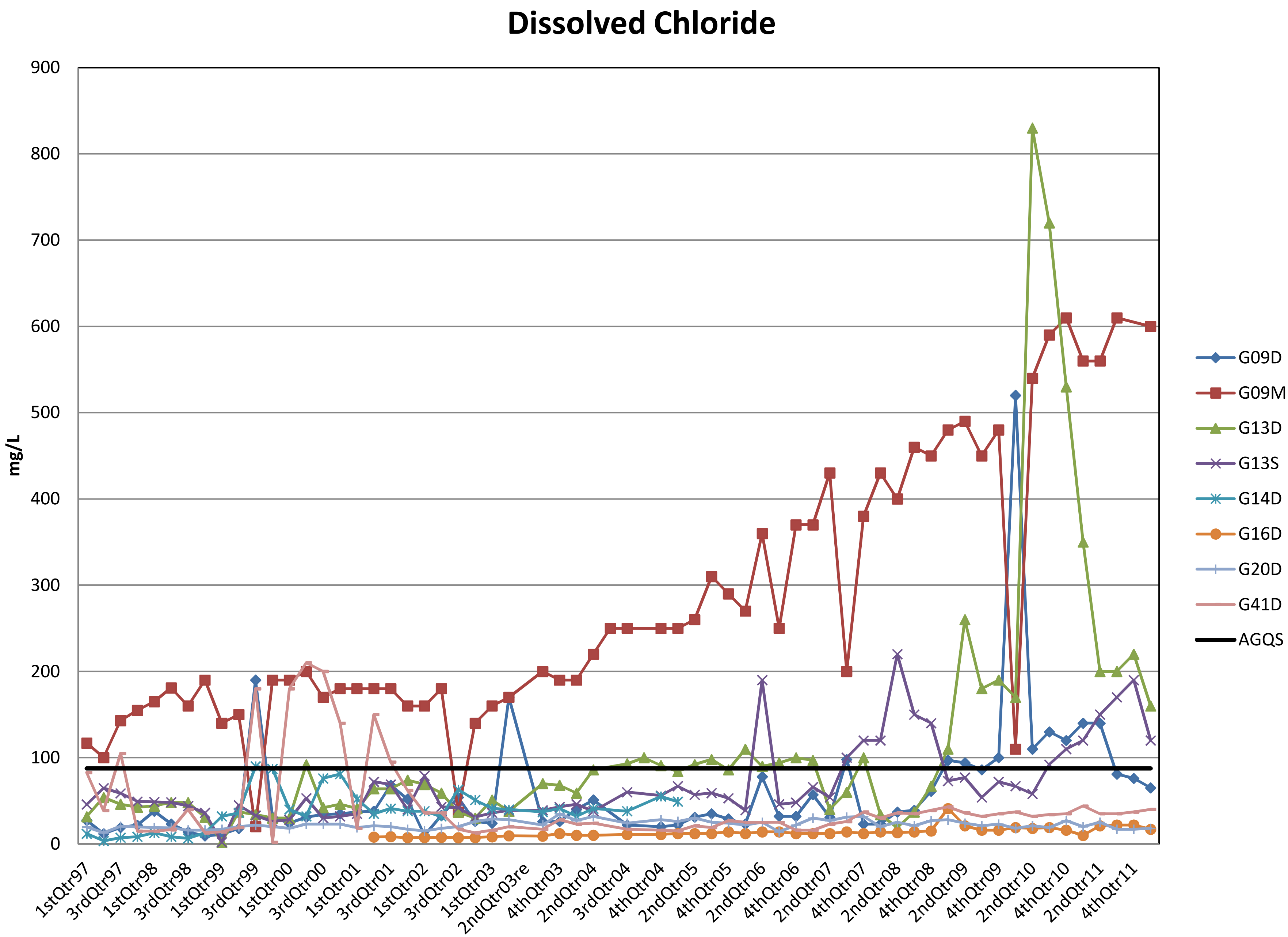
Winnebago Landfill
Bedrock Zone



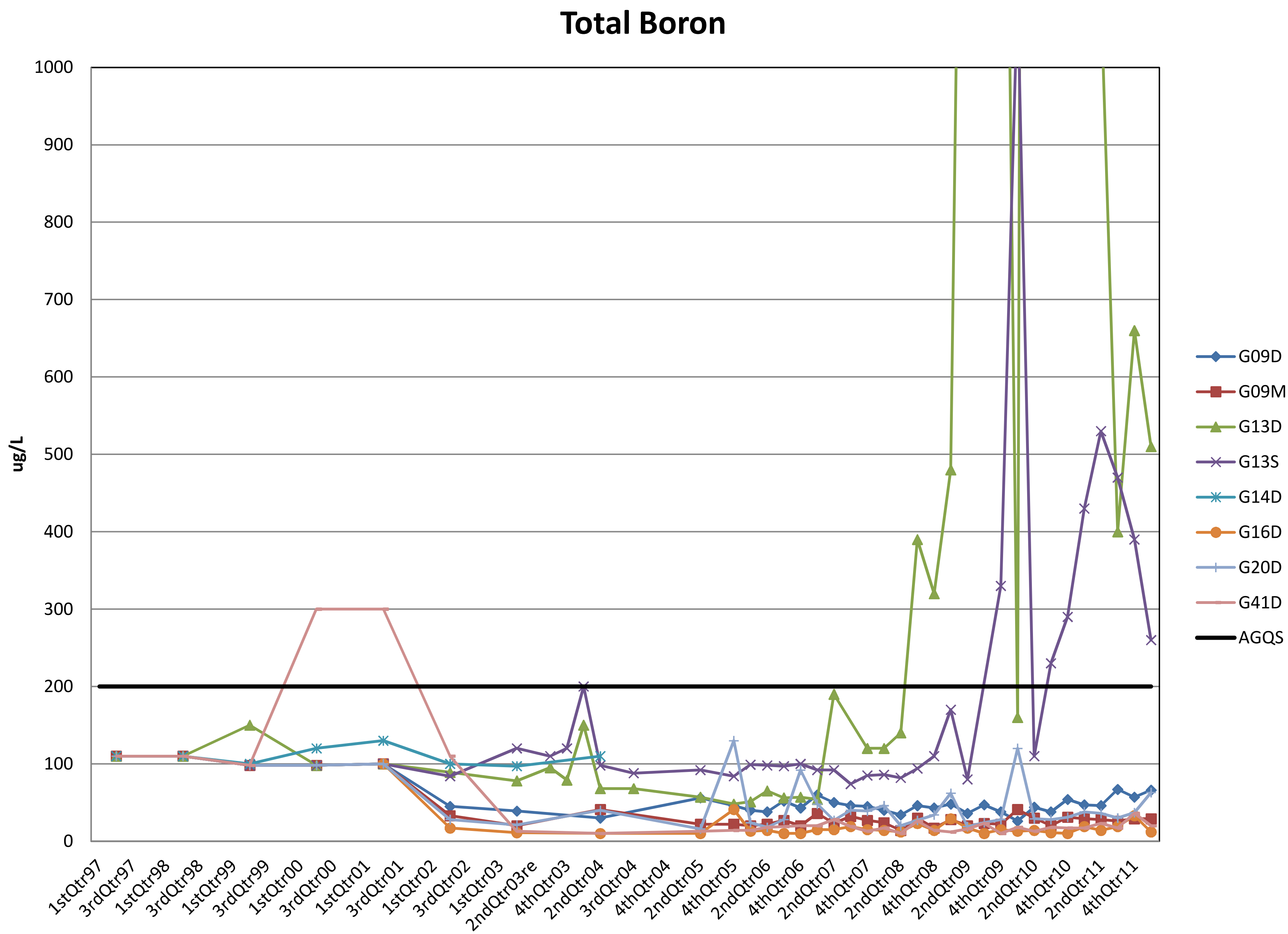
Winnebago Landfill
Bedrock Zone



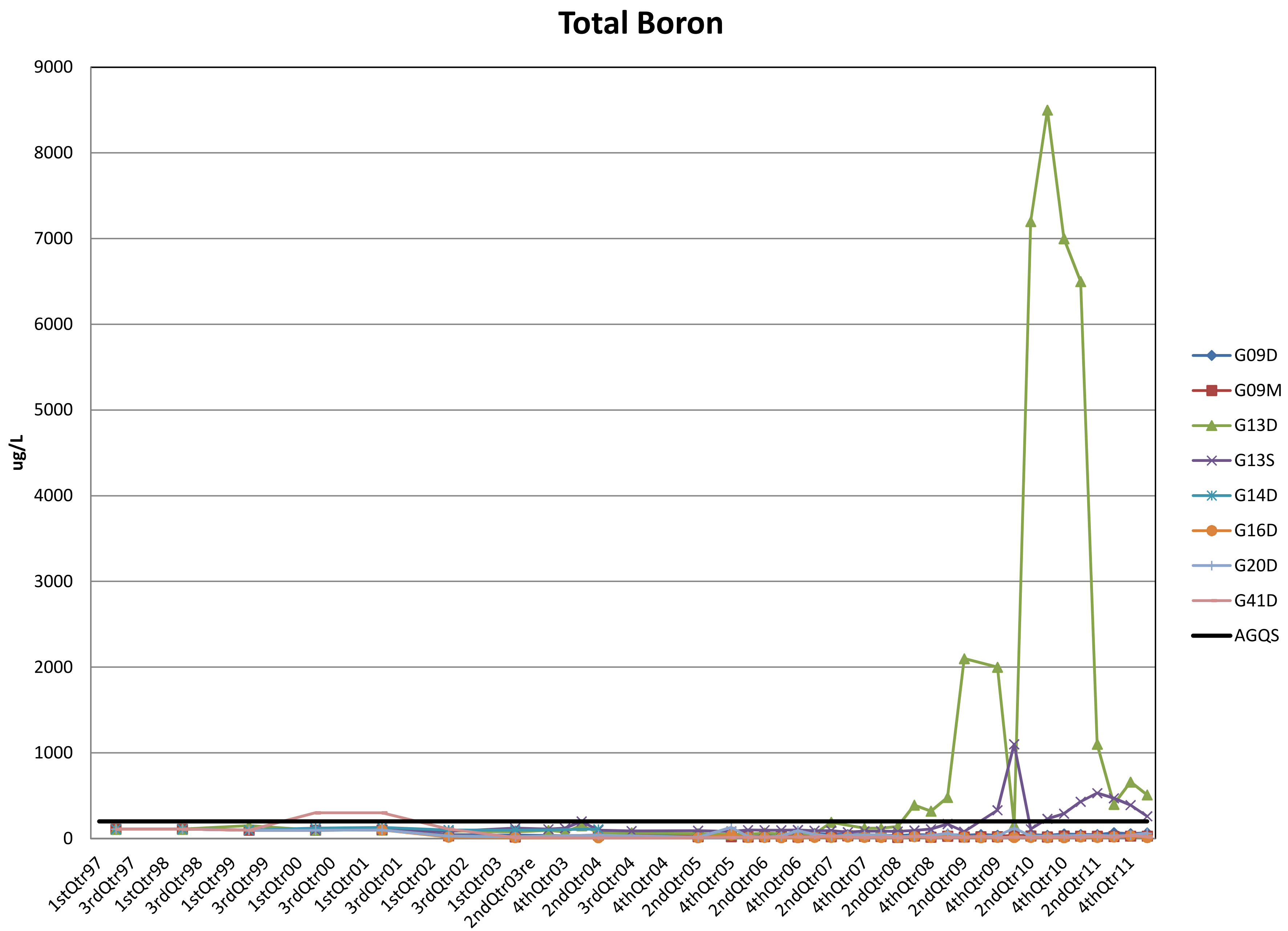
Winnebago Landfill
Bedrock Zone



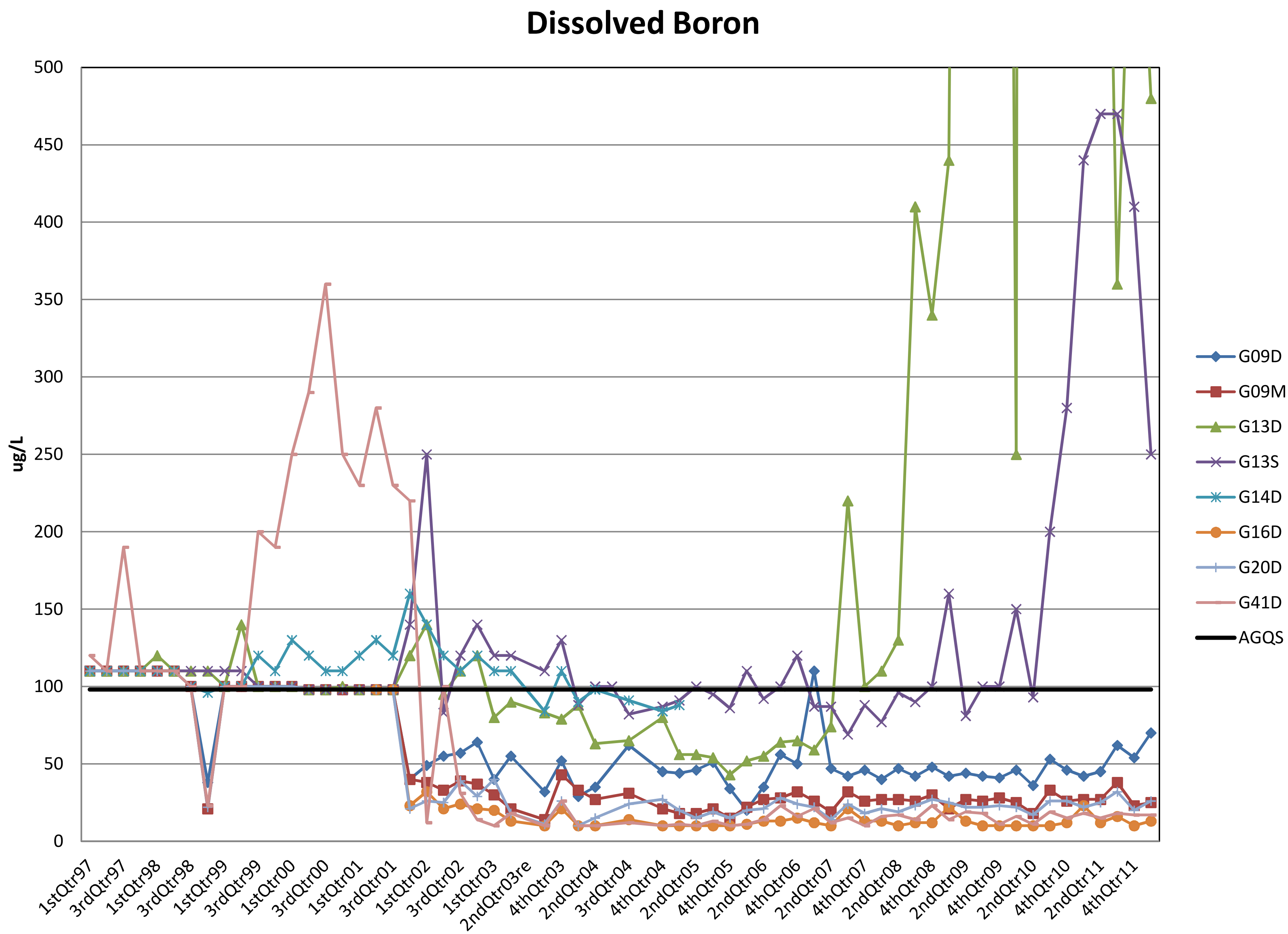
Winnebago Landfill
Bedrock Zone



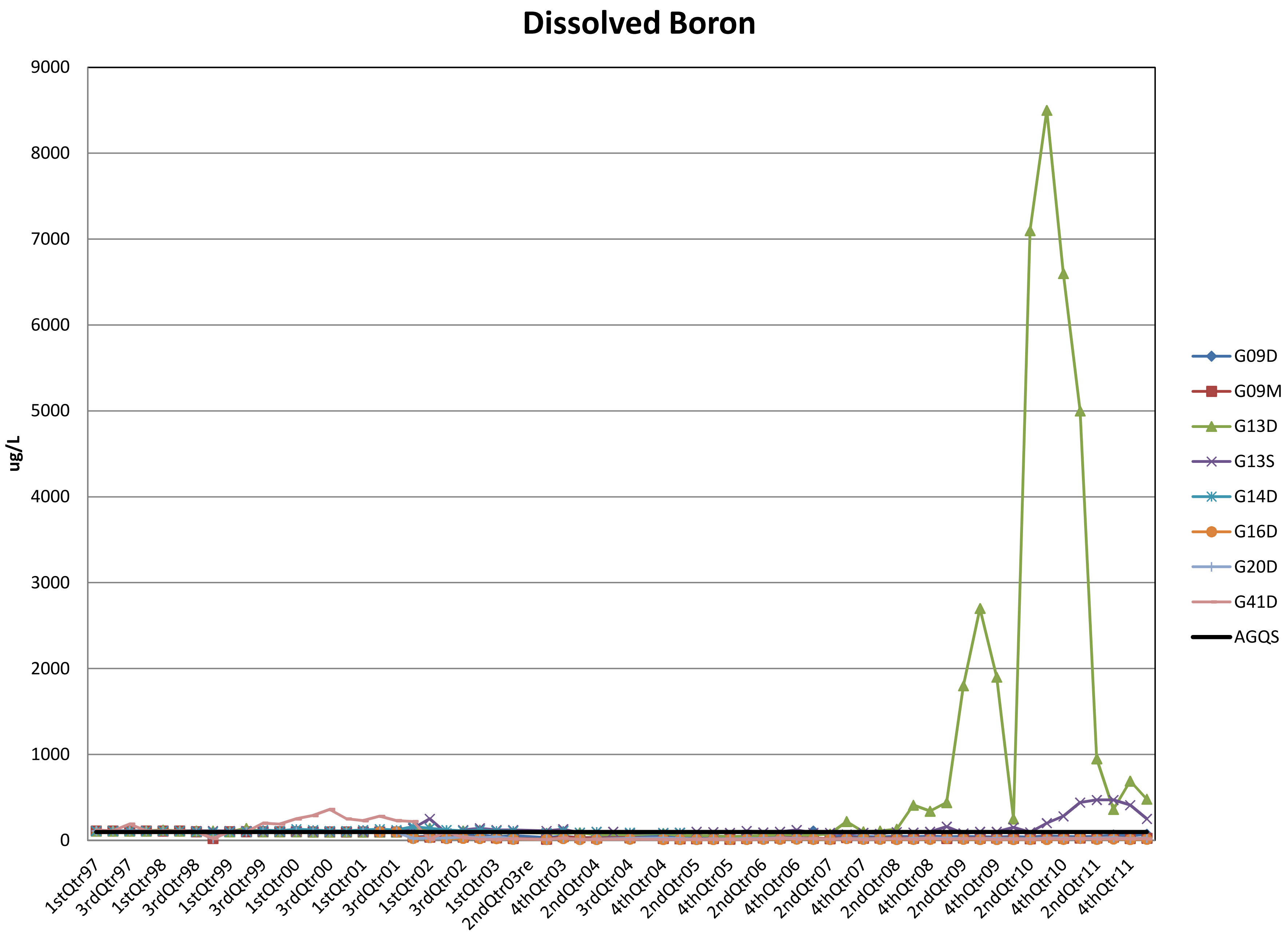
Winnebago Landfill
Bedrock Zone



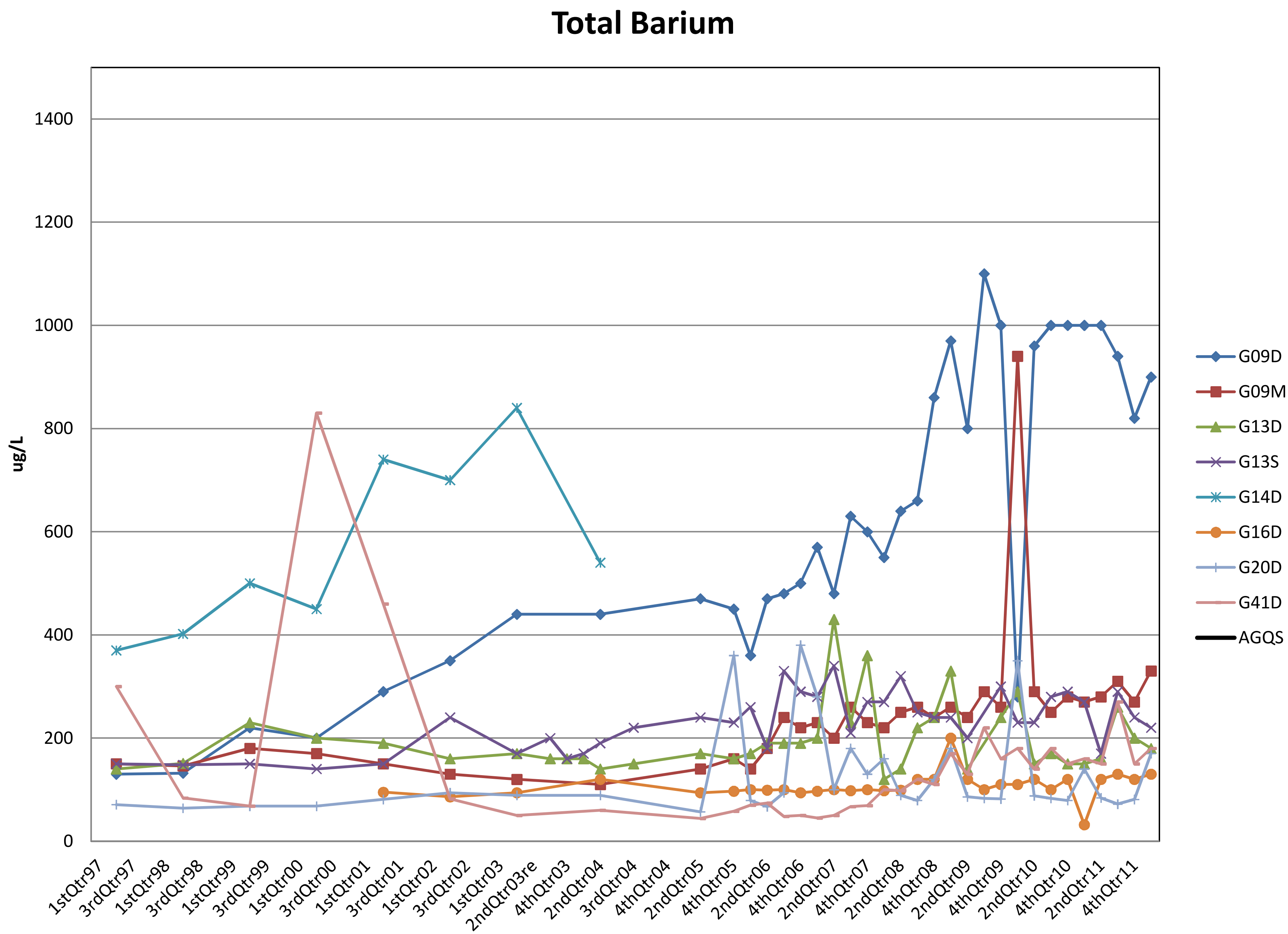
Winnebago Landfill
Bedrock Zone



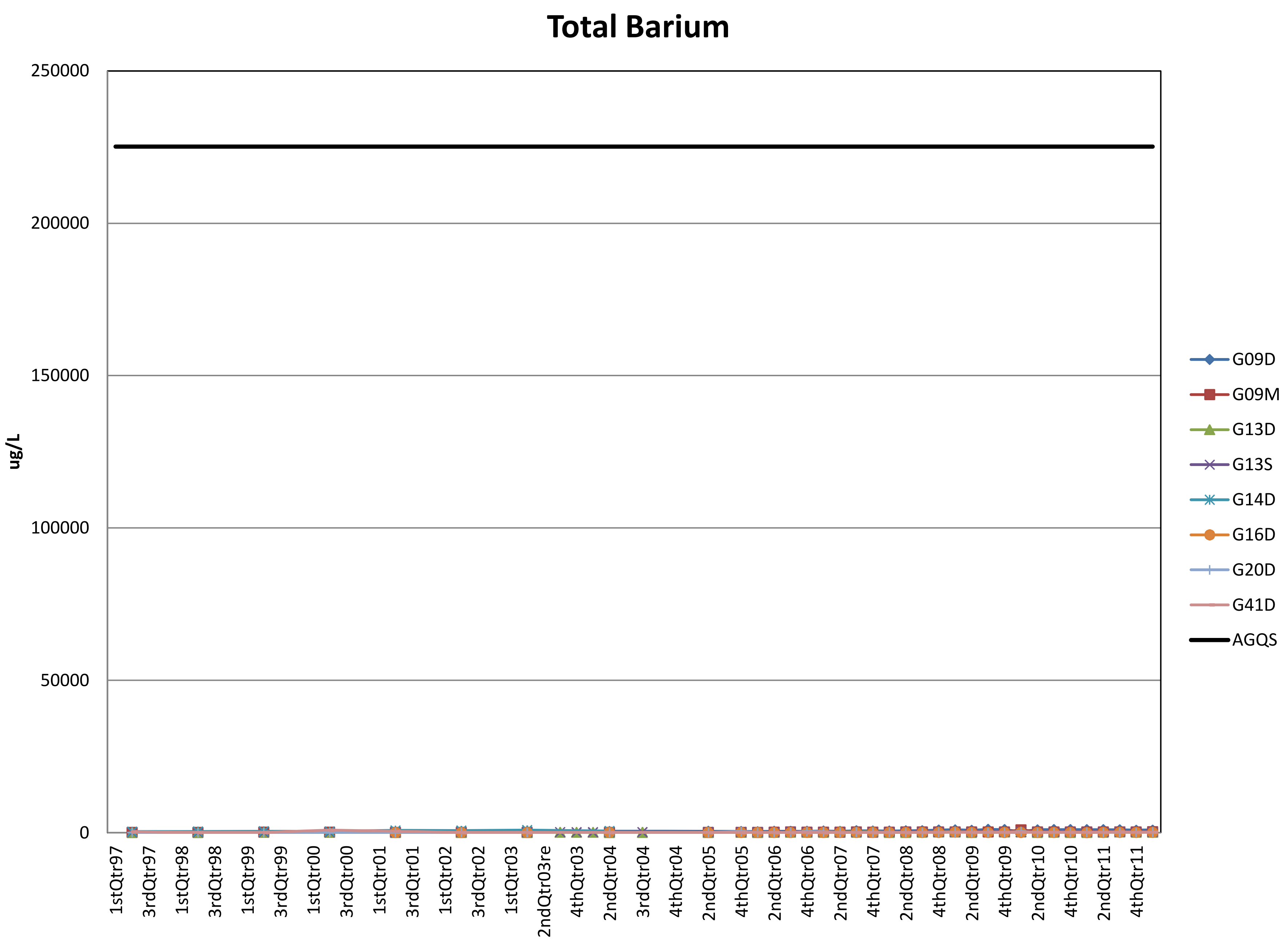
Winnebago Landfill
Bedrock Zone



Winnebago Landfill
Bedrock Zone

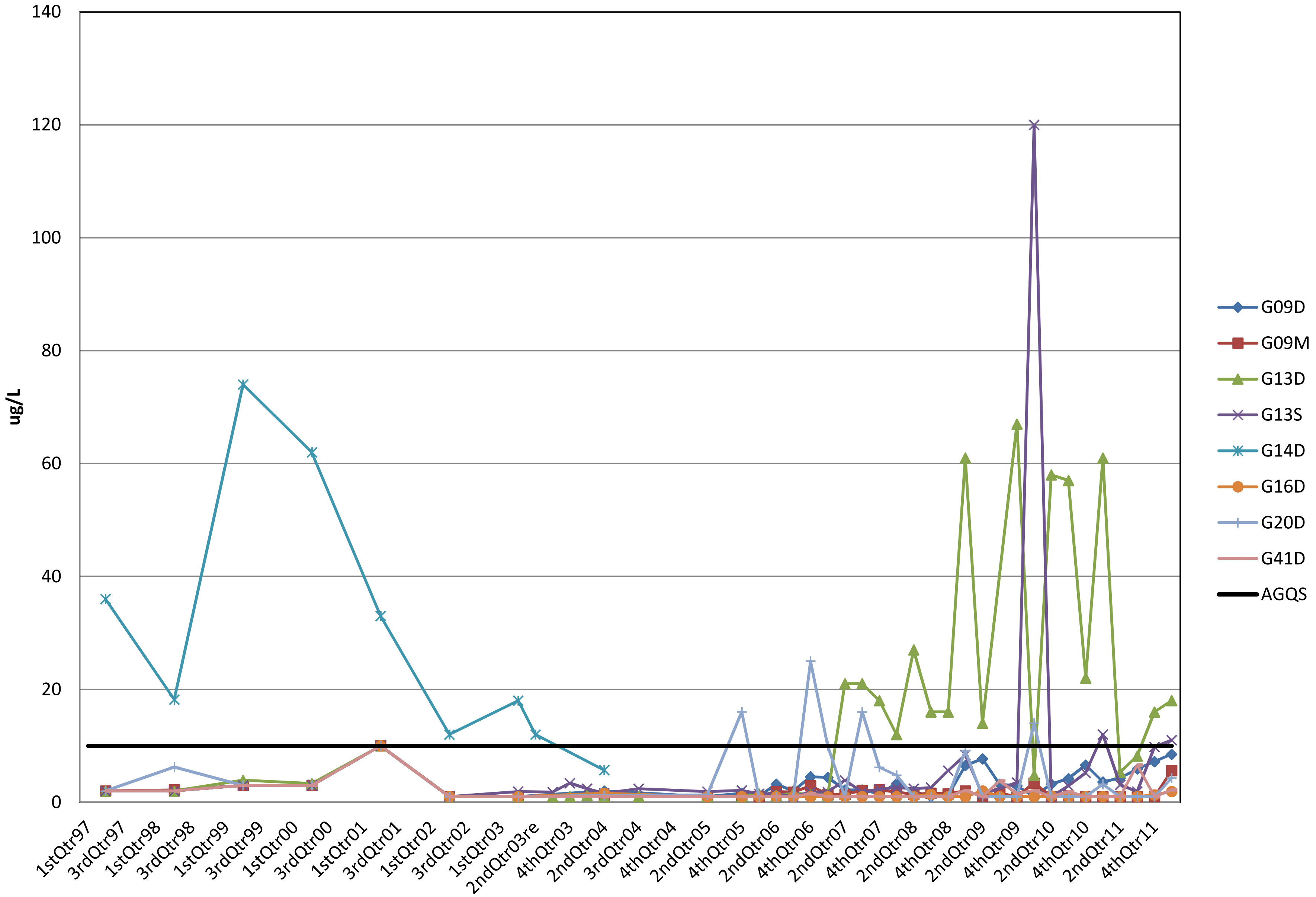


Winnebago Landfill
Bedrock Zone

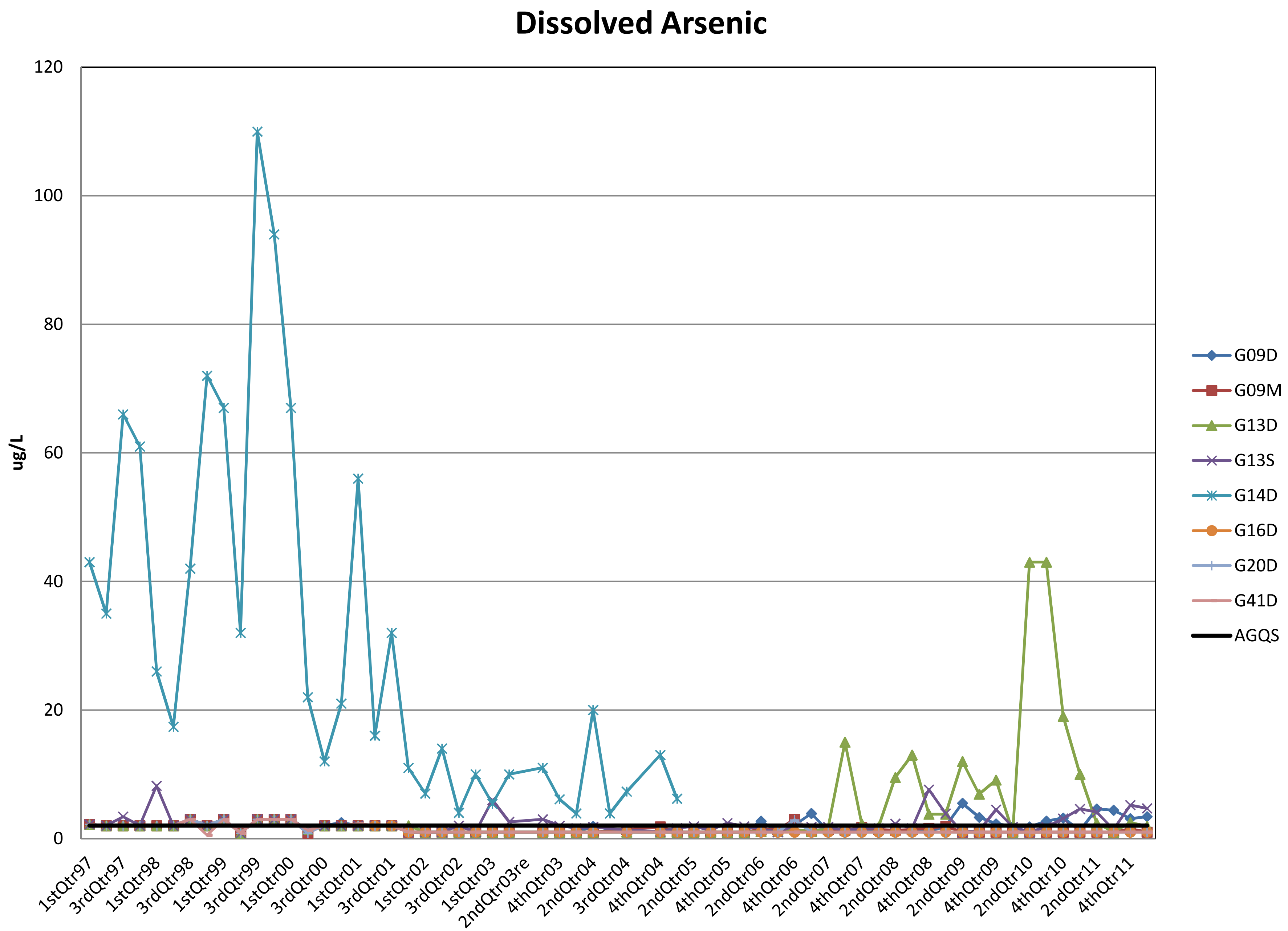


Winnebago Landfill
Bedrock Zone

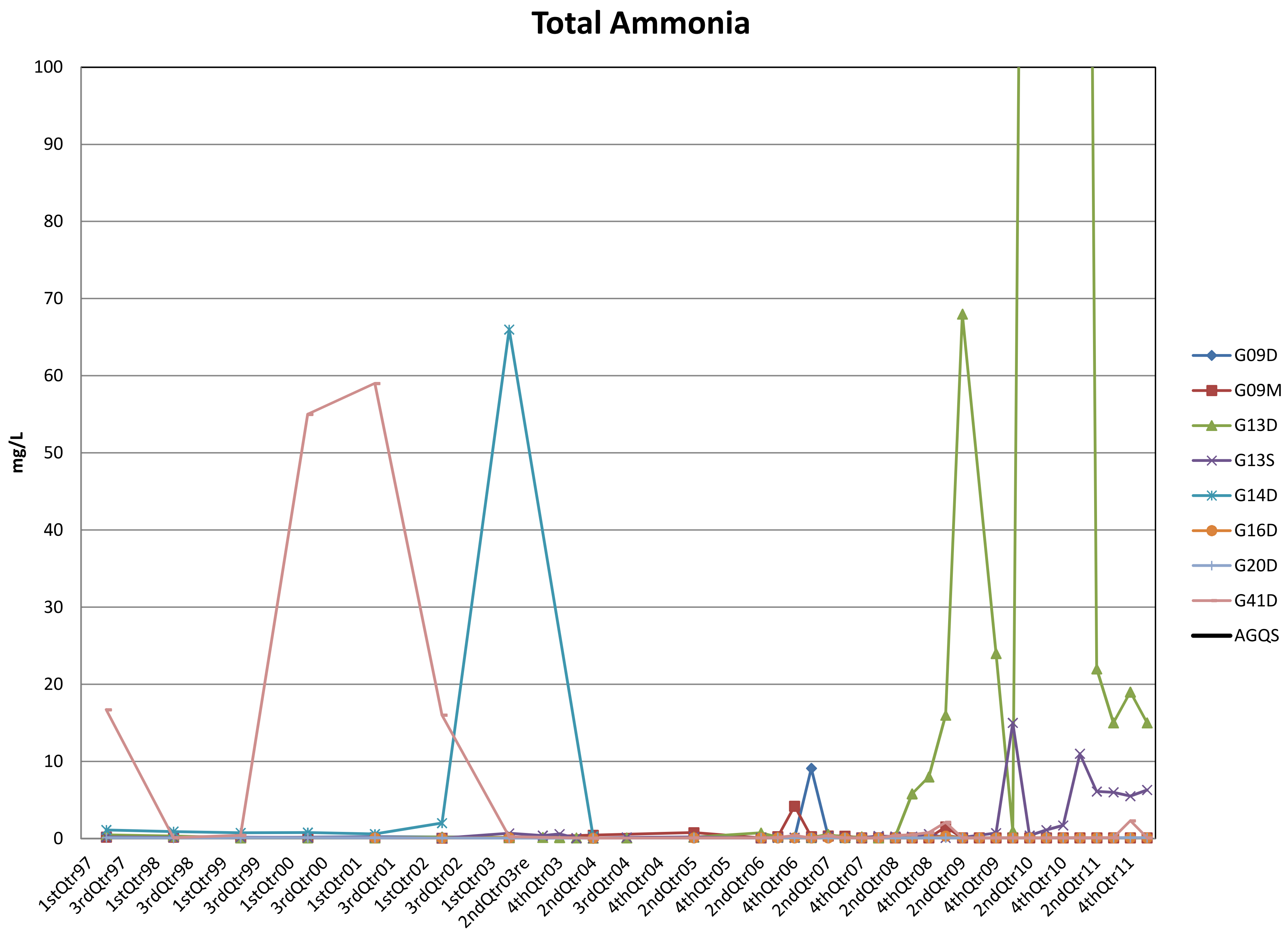
Total Arsenic



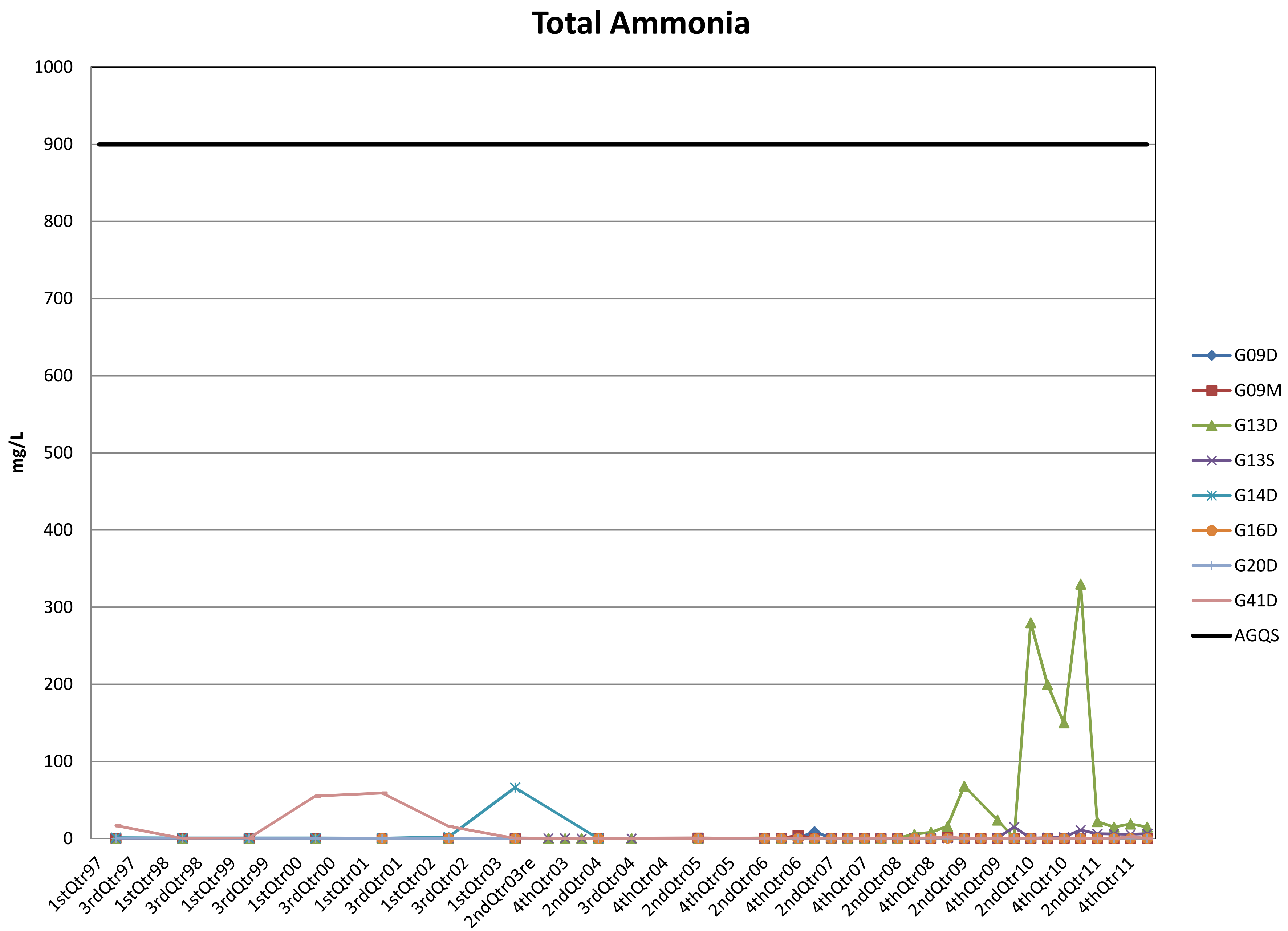
Winnebago Landfill
Bedrock Zone



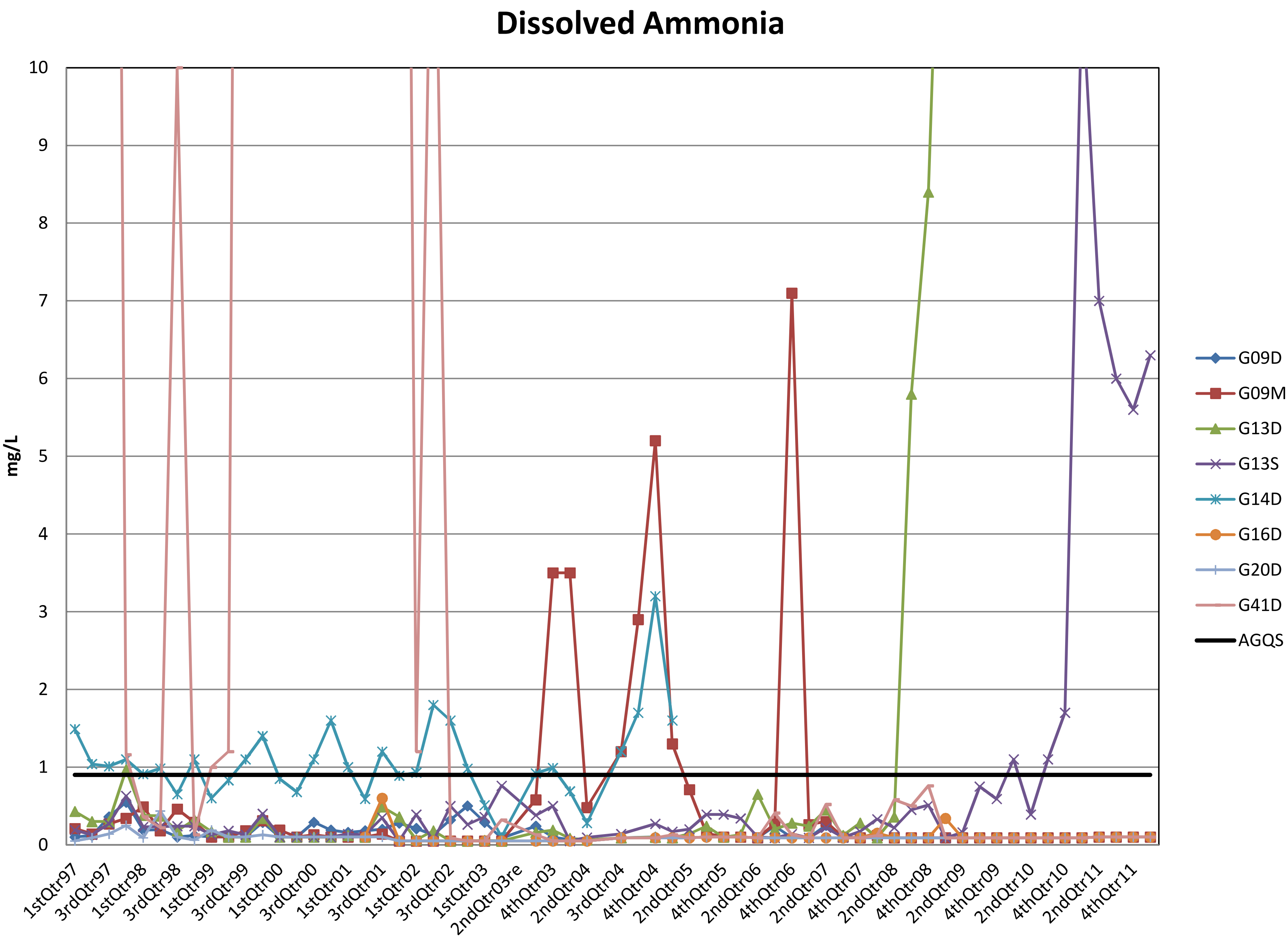
Winnebago Landfill
Bedrock Zone



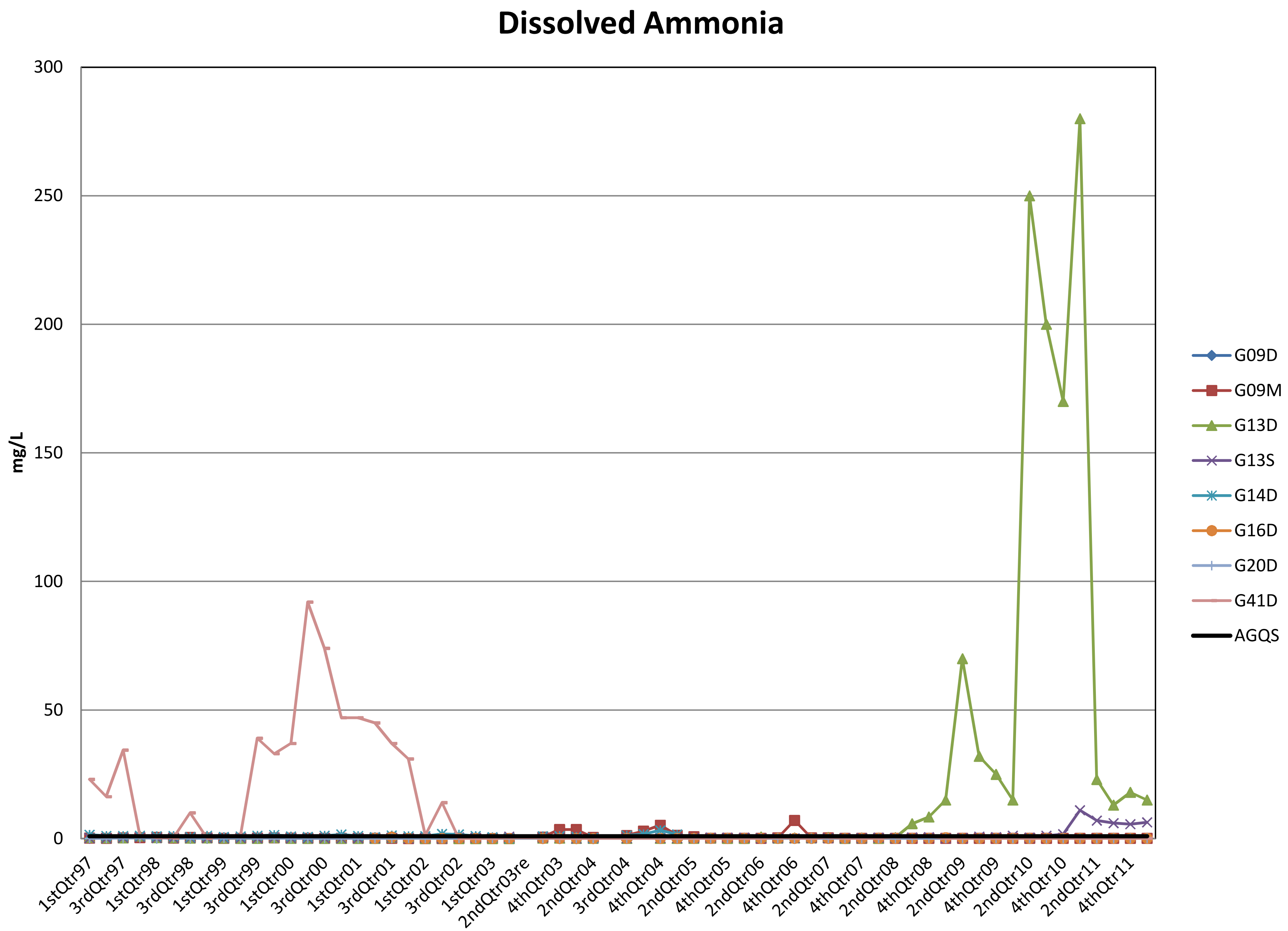
Winnebago Landfill
Bedrock Zone



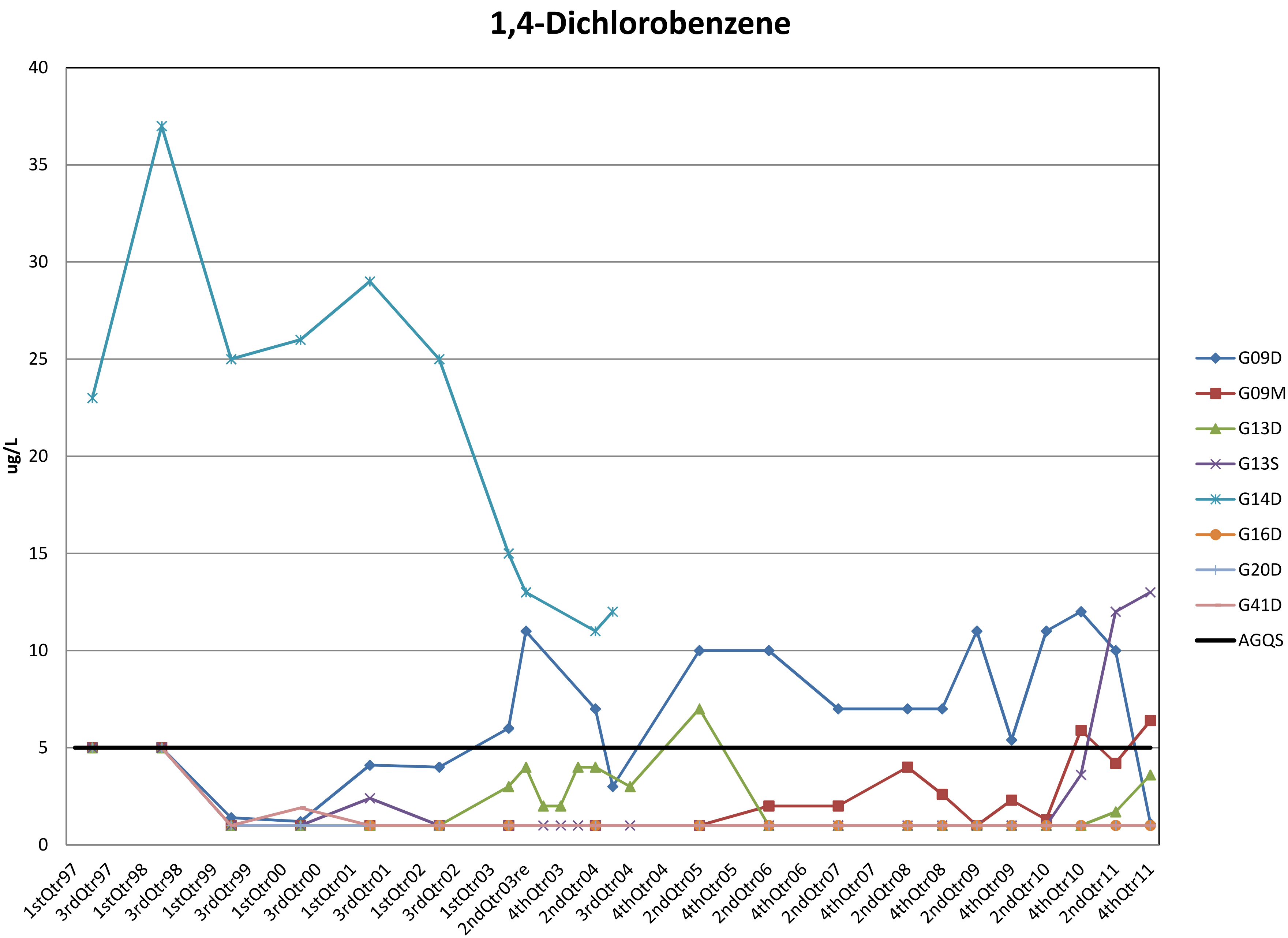
Winnebago Landfill
Bedrock Zone



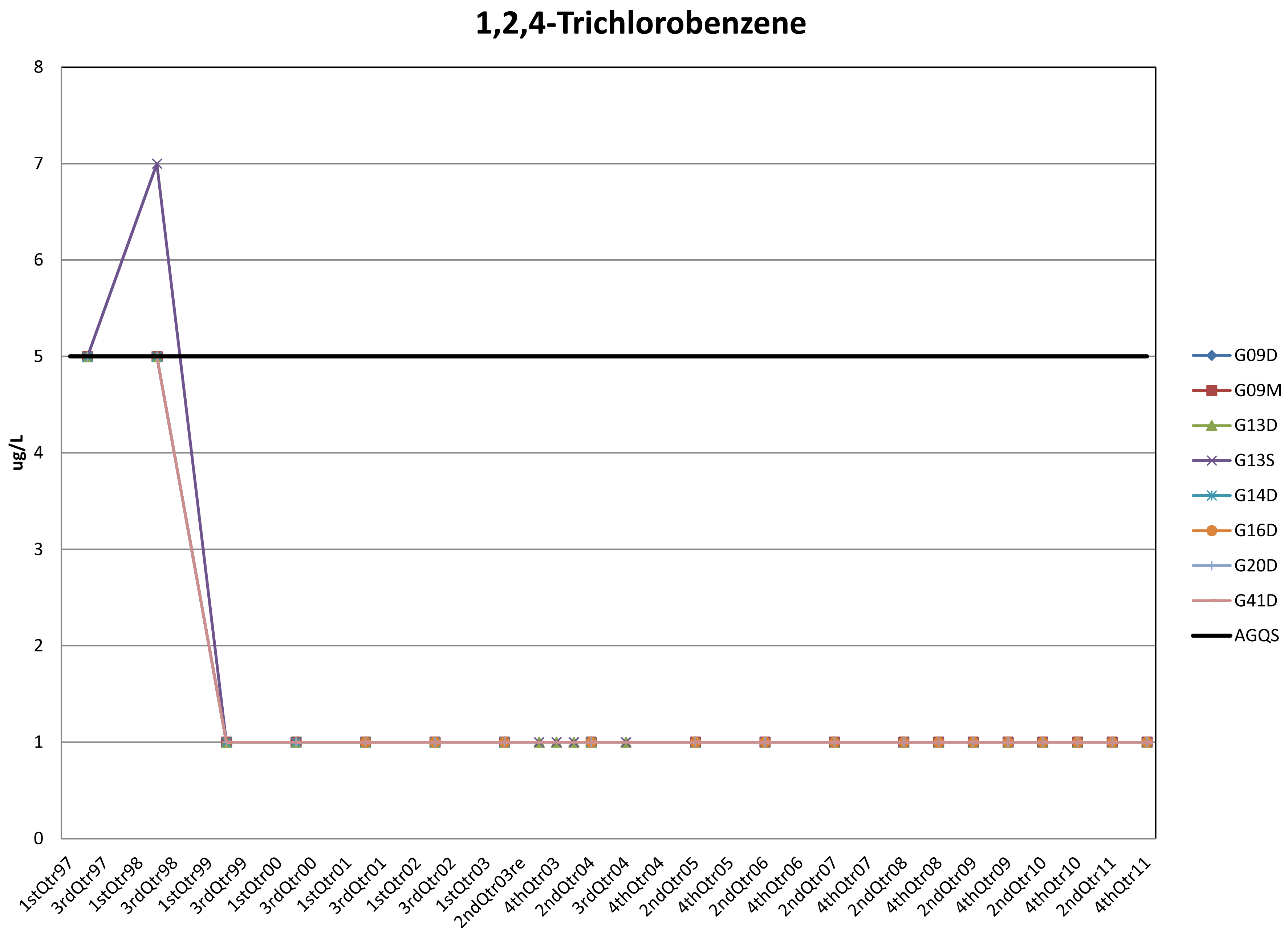
Winnebago Landfill
Bedrock Zone



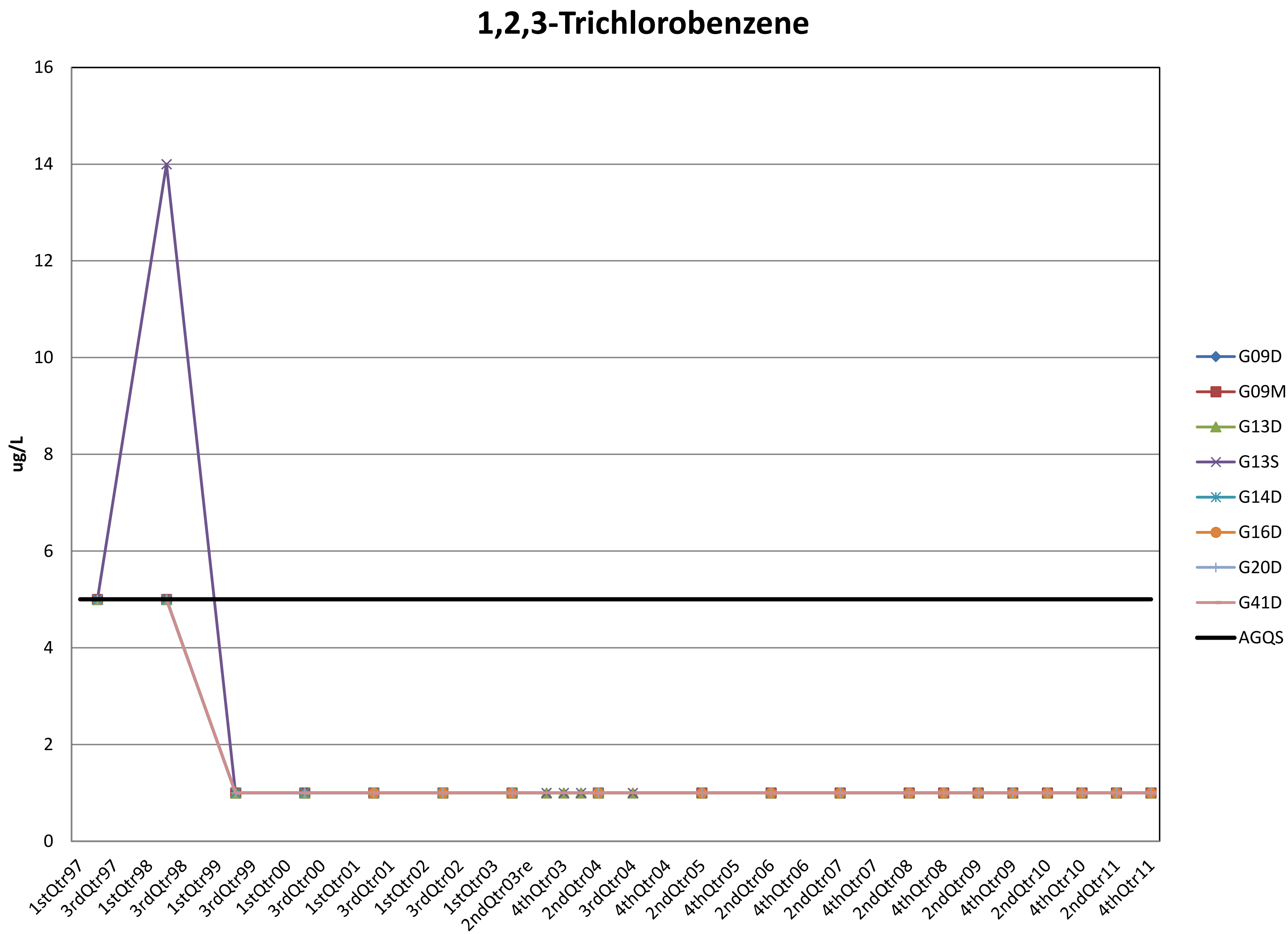
Winnebago Landfill
Bedrock Zone



Winnebago Landfill
Bedrock Zone

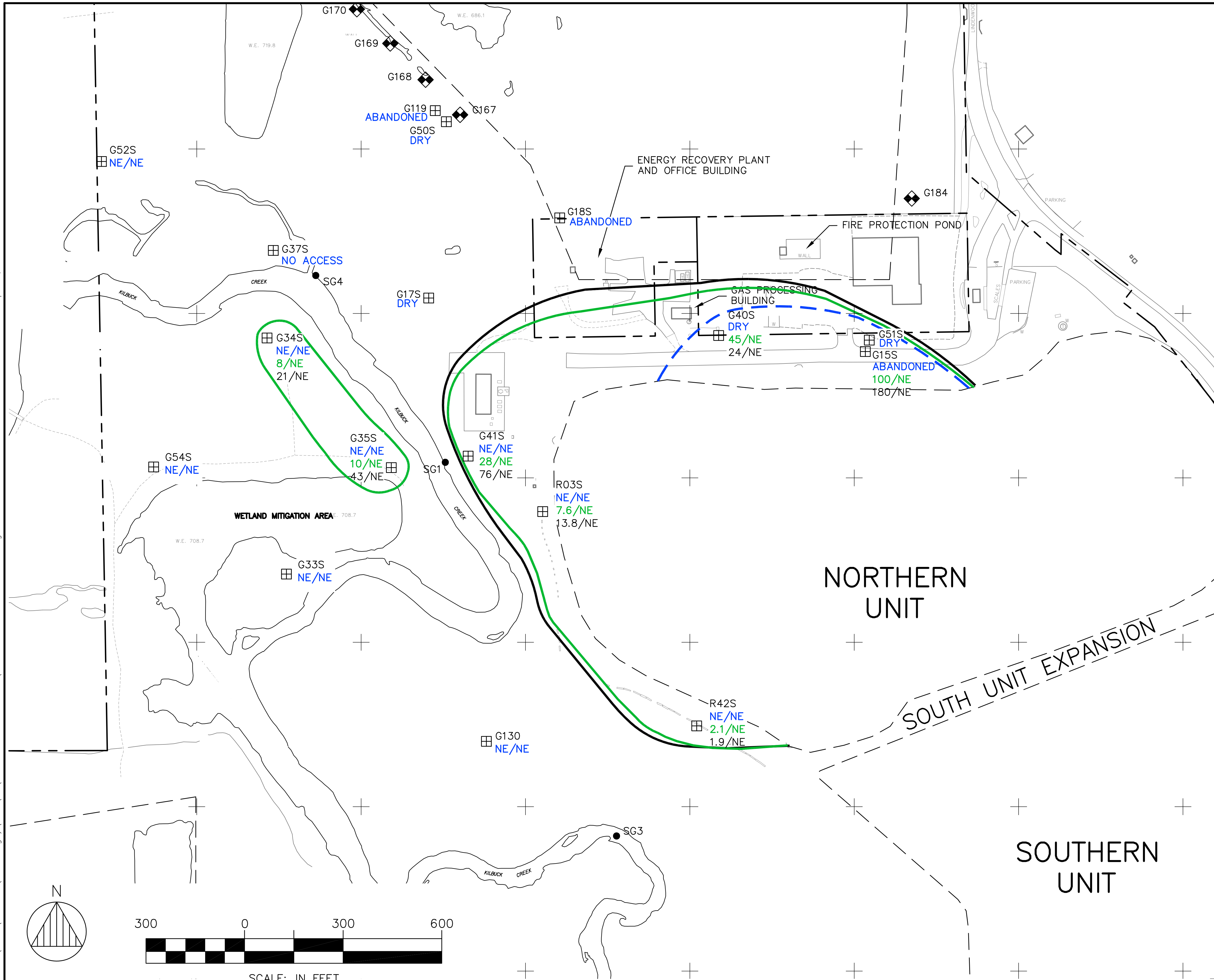


Winnebago Landfill
Bedrock Zone



APPENDIX G

Upper Zone Concentration Exceedence Maps



EXPLANATION

2012 CONCENTRATIONS OF AMMONIA (mg/L)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
10/20	2007 CONCENTRATION DISSOLVED/TOTAL
15/16	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE
	2007 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE
	2004 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37S INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.
7. AGQS FOR DISSOLVED/TOTAL AMMONIA = 0.9/900 mg/L.

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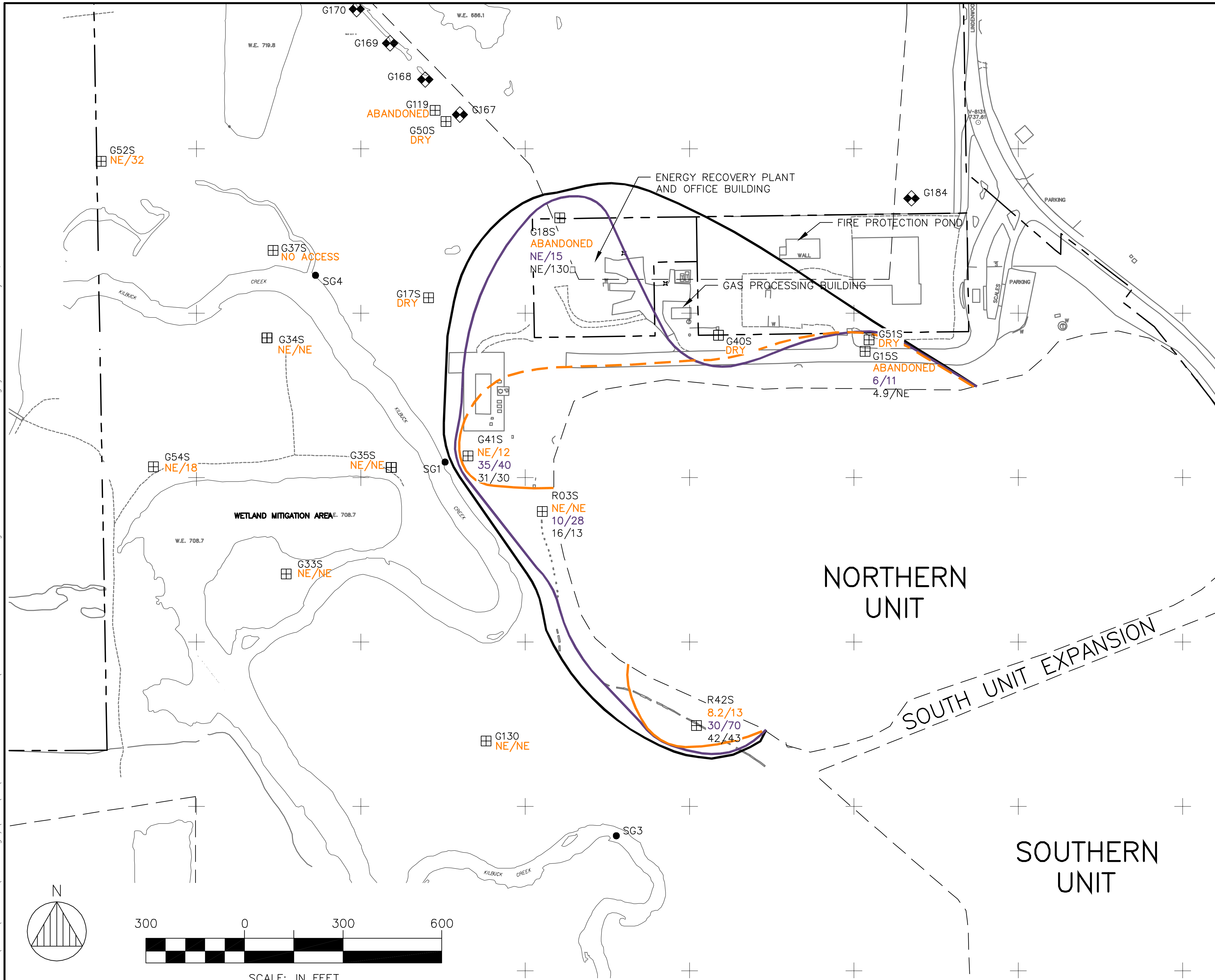
DRAWN BY: WCU
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012 AMMONIA EXCEEDENCES – UPPER ZONE

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: G-1



EXPLANATION

2012 CONCENTRATIONS OF ARSENIC ($\mu g/L$)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
10/20	2007 CONCENTRATION DISSOLVED/TOTAL
15/16	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE
	2007 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE
	2004 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37S INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.
7. AGQS FOR DISSOLVED/TOTAL ARSENIC = 2/10 $\mu g/L$.

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DRAWN BY: WCU
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012
ARSENIC EXCEEDENCES – UPPER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: G-2

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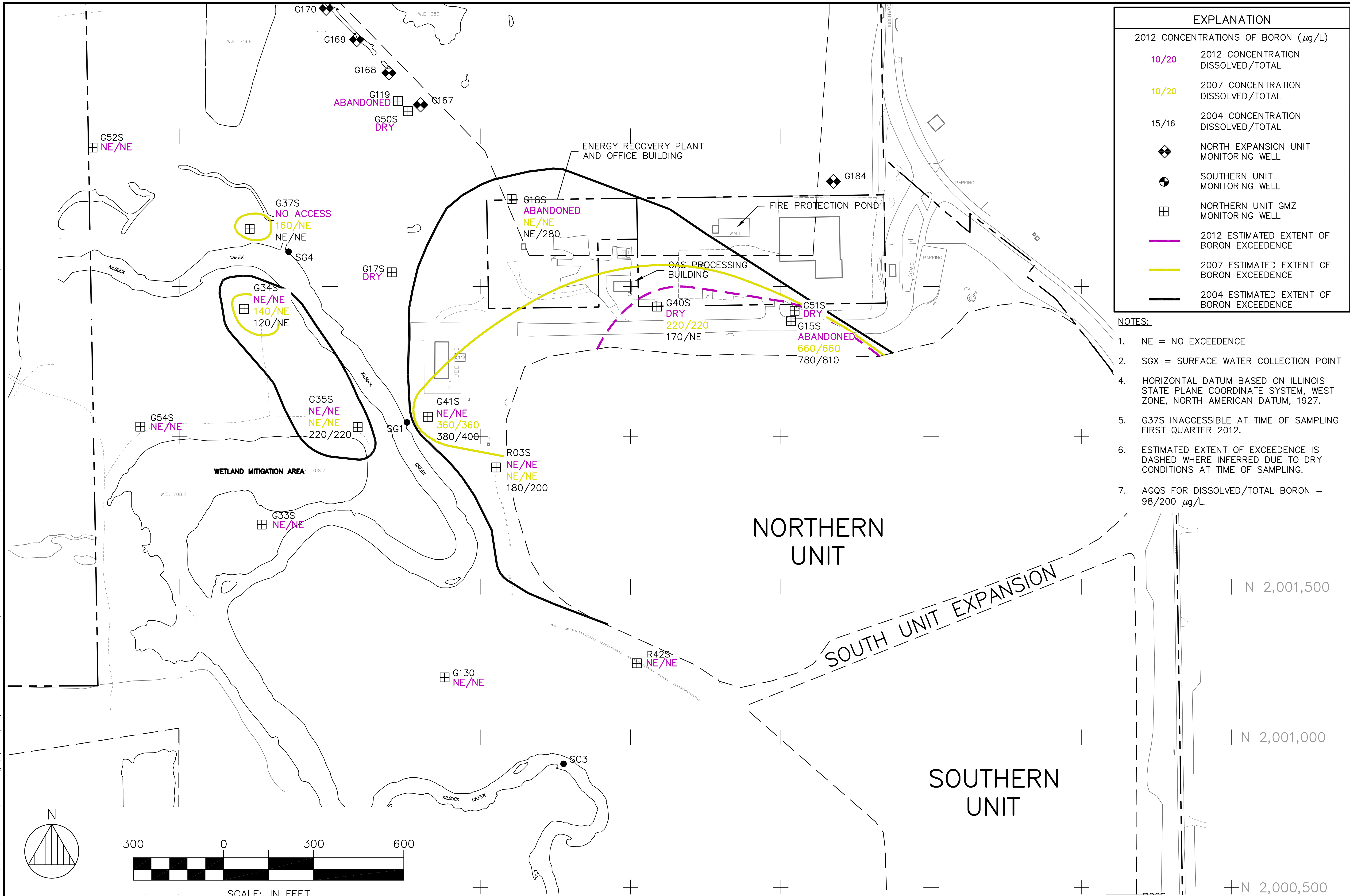

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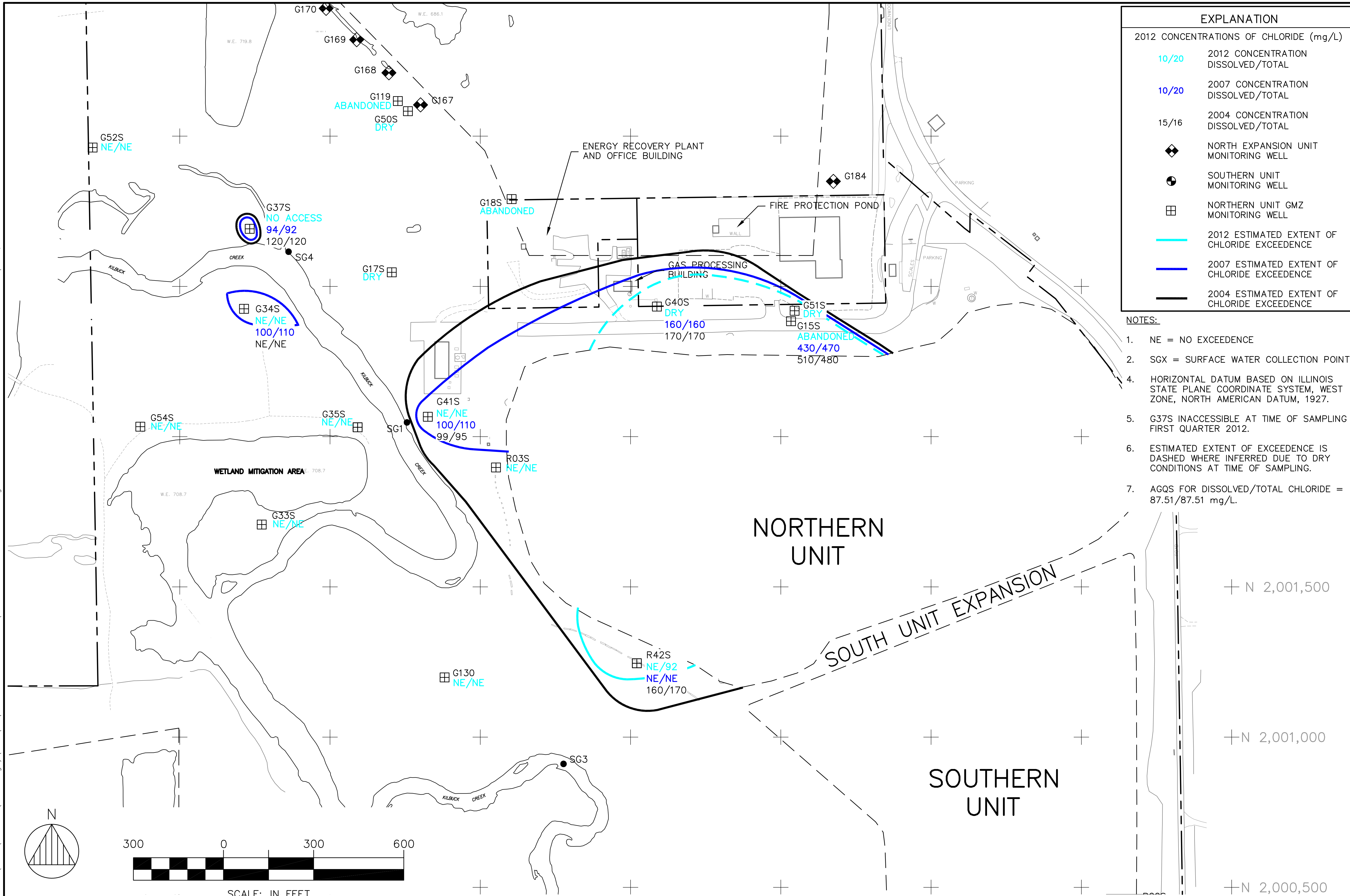
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012
BORON EXCEEDENCES – UPPER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: G-3



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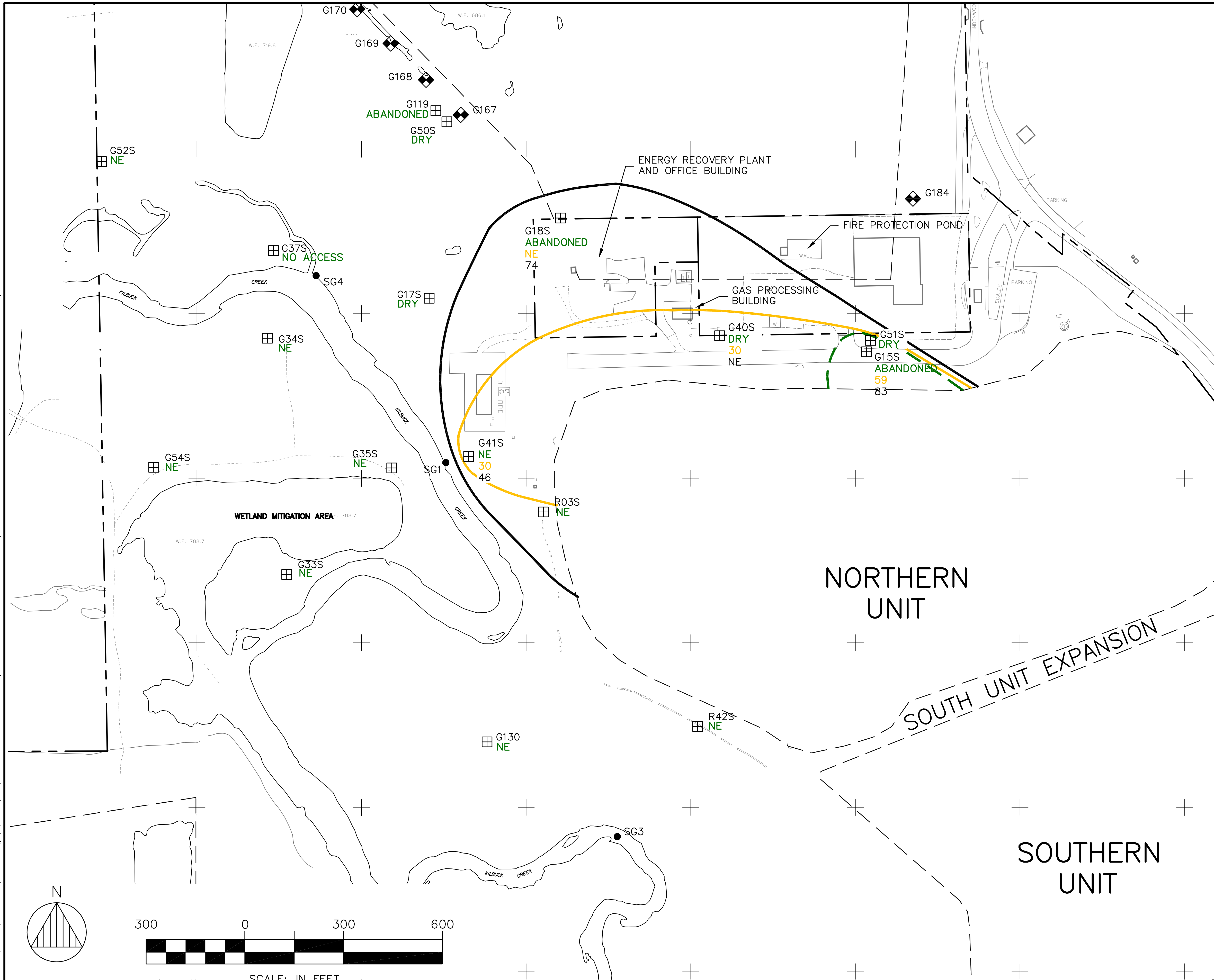
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2007 CHLORIDE EXCEEDENCES – UPPER ZONE
PLANS PREPARED FOR WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: G-4



EXPLANATION

2012 CONCENTRATIONS OF POTASSIUM (mg/L)

NE	2012 CONCENTRATION TOTAL
30	2007 CONCENTRATION TOTAL
83	2004 CONCENTRATION TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF POTASSIUM EXCEEDENCE
	2007 ESTIMATED EXTENT OF POTASSIUM EXCEEDENCE
	2004 ESTIMATED EXTENT OF POTASSIUM EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37S INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.
7. AGQS FOR DISSOLVED/TOTAL POTASSIUM = 29.01 mg/L.

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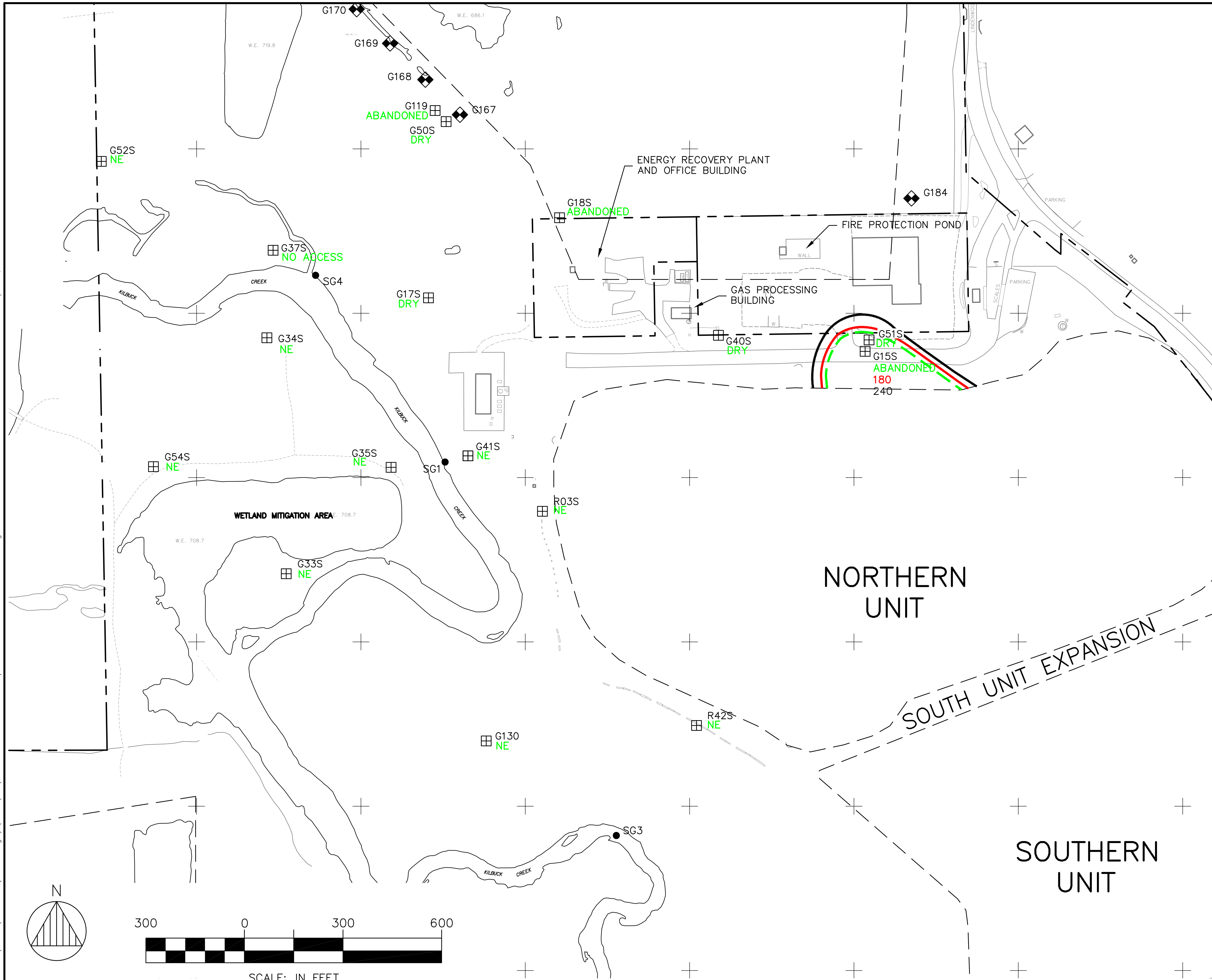
DRAWN BY: WCU
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012 TOTAL
POTASSIUM EXCEEDENCES - UPPER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: G-5

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\UPPER ZONE GMZ EXTENT.dwg Tab: FIG 5 User: wulewicz Plotted: Apr 11, 2012 - 10:25 AM



EXPLANATION

2012 CONCENTRATIONS OF SODIUM (mg/L)

NE	2012 CONCENTRATION TOTAL
30	2007 CONCENTRATION TOTAL
83	2004 CONCENTRATION TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF SODIUM EXCEEDENCE
	2007 ESTIMATED EXTENT OF SODIUM EXCEEDENCE
	2004 ESTIMATED EXTENT OF SODIUM EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37S INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.
7. AGQS FOR DISSOLVED/TOTAL SODIUM = 164.79 mg/L.

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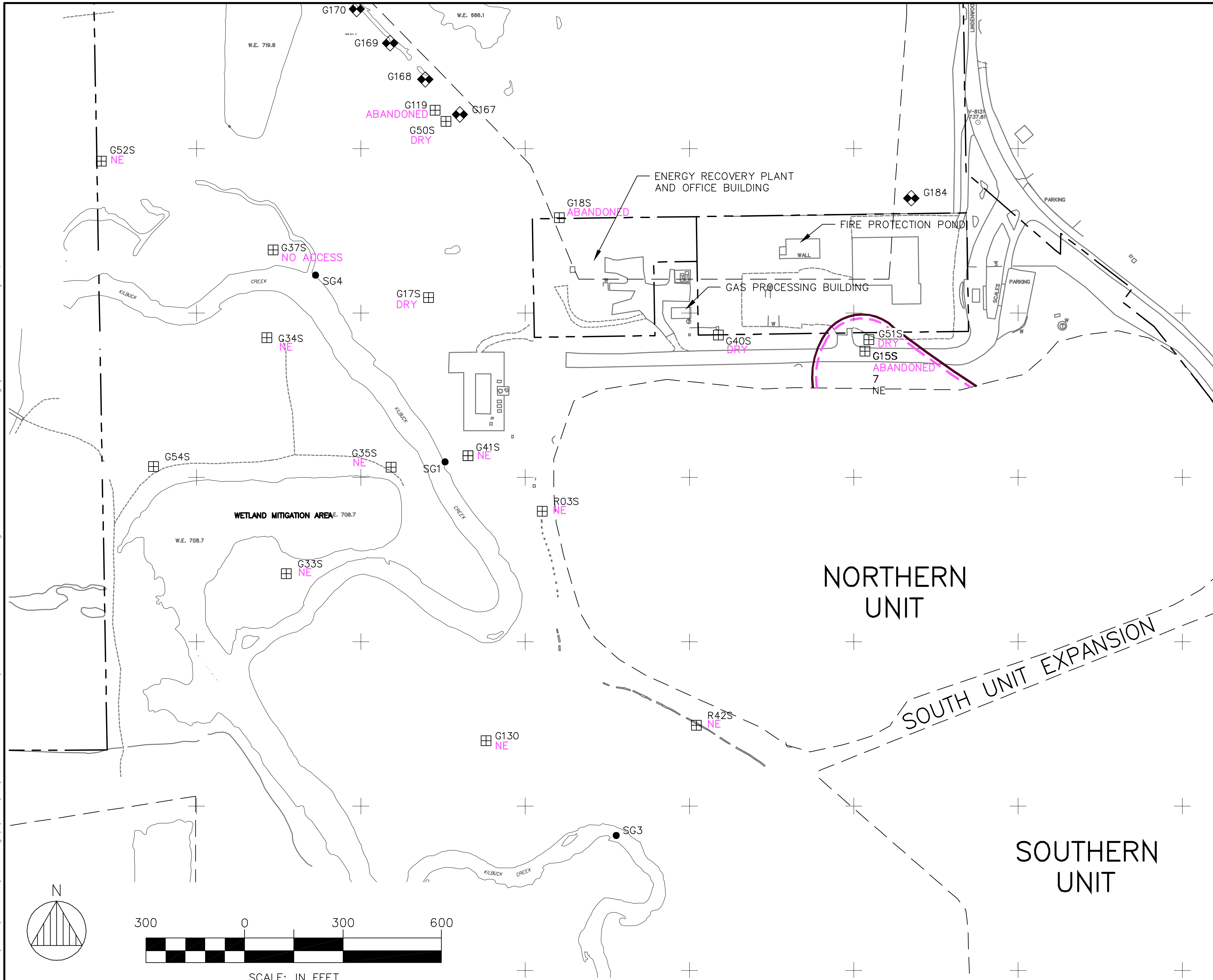
DRAWN BY: WCU
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012 TOTAL SODUIM EXCEEDENCES – UPPER ZONE

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: G-6



EXPLANATION

2012 CONCENTRATIONS OF 1,4–DICHLOROBENZENE ($\mu g/L$)

NE	2012 CONCENTRATION
30	2007 CONCENTRATION
83	2004 CONCENTRATION
◆	NORTH EXPANSION UNIT MONITORING WELL
◐	SOUTHERN UNIT MONITORING WELL
⊞	NORTHERN UNIT GMZ MONITORING WELL
—	2012 ESTIMATED EXTENT OF 1,4–DICHLOROBENZENE EXCEEDENCE
—	2007 ESTIMATED EXTENT OF 1,4–DICHLOROBENZENE EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37S INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.
7. AGQS FOR 1,4–DICHLOROBENZENE = 5 $\mu g/L$.

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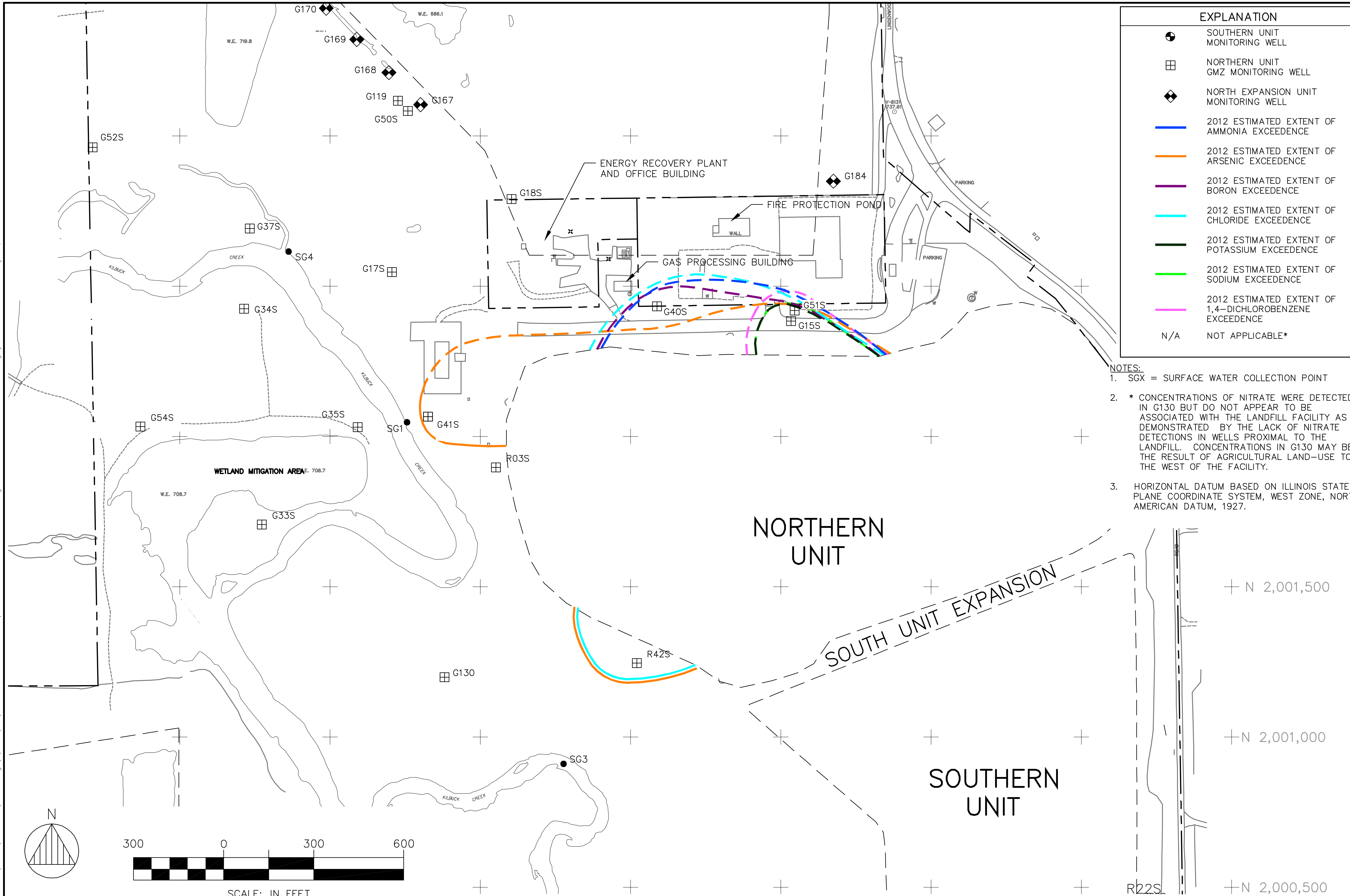
DRAWN BY: WCU
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012 1,4–DICHLOROBENZENE UPPER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90–114
SHEET NUMBER: G-7



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APPROVED BY: JLR | DESIGNED BY: JLR | DRAWN BY: WCU

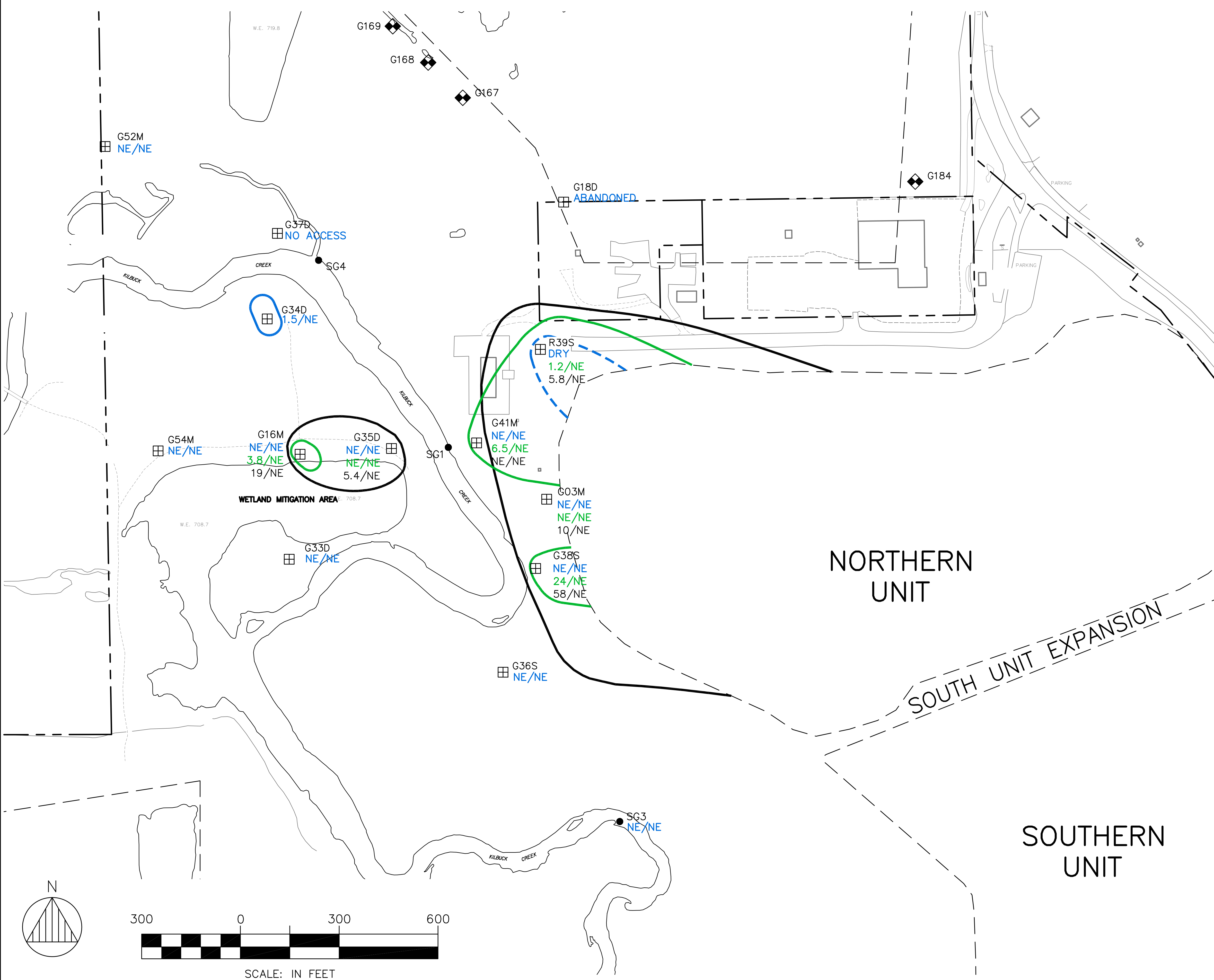
2012 COMPOSITE EXCEEDENCES – UPPER ZONE

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90–114
SHEET NUMBER: G-8

APPENDIX H

Lower Zone Concentration Exceedence Maps



EXPLANATION

2012 CONCENTRATIONS OF AMMONIA (mg/L)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
3.5/5.7	2007 CONCENTRATION DISSOLVED/TOTAL
4.5/6.7	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE
	2007 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE
	2004 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37D INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.
7. AGQS FOR DISSOLVED/TOTAL AMMONIA = 0.9/900 mg/L.

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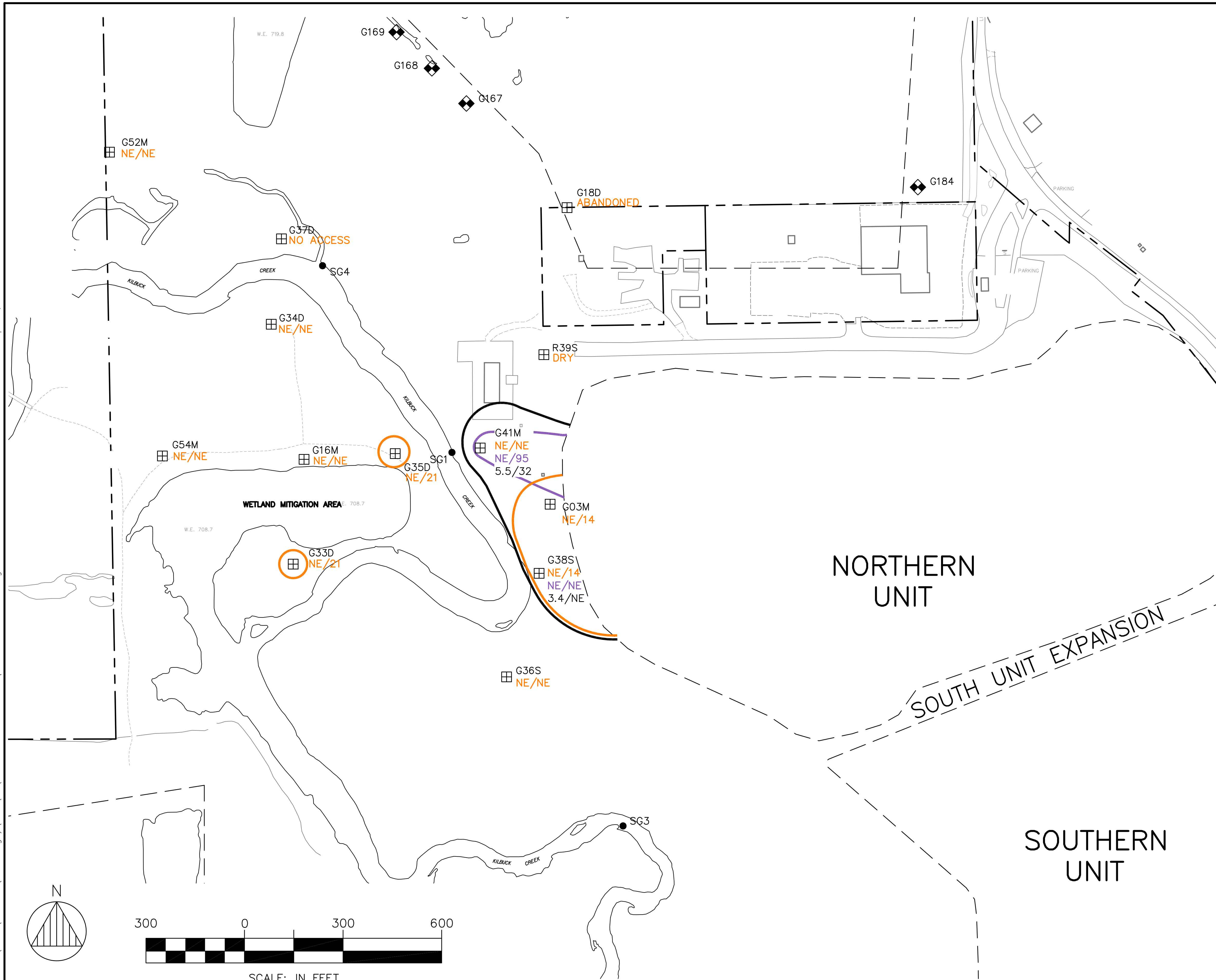
DRAWN BY: WCU
DESIGNED BY: JLR
APPROVED BY: JLR

1ST QUARTER 2012
AMMONIA EXCEEDENCES - LOWER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: H-1

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: FIG 1 User: wulewicz Plotted: Apr 11, 2012 - 10:27 AM



EXPLANATION

2012 CONCENTRATIONS OF ARSENIC (μg/L)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
3.5/5.7	2007 CONCENTRATION DISSOLVED/TOTAL
4.5/6.7	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE
	2007 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE
	2004 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37D INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. AGQS FOR DISSOLVED/TOTAL ARSENIC = 2/10 μg/L.

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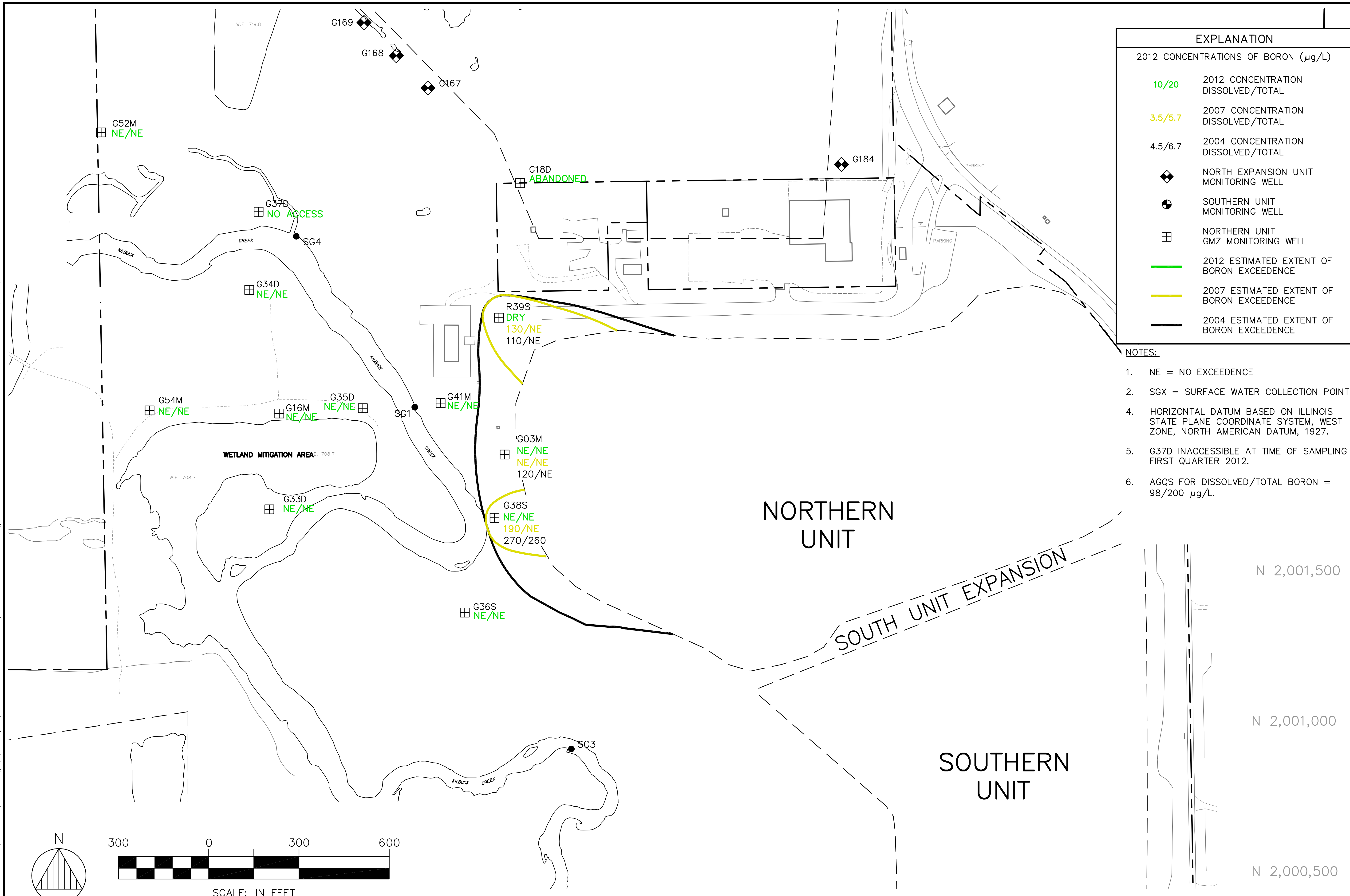
APPROVED BY: JLR

1ST QUARTER 2012
ARSENIC EXCEEDENCES – LOWER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: H-2

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: FIG 2 User: wulewicz Plotted: Apr 11, 2012 - 10:28 AM



EXPLANATION

2012 CONCENTRATIONS OF BORON (μg/L)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
3.5/5.7	2007 CONCENTRATION DISSOLVED/TOTAL
4.5/6.7	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF BORON EXCEEDENCE
	2007 ESTIMATED EXTENT OF BORON EXCEEDENCE
	2004 ESTIMATED EXTENT OF BORON EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37D INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. AGQS FOR DISSOLVED/TOTAL BORON = 98/200 μg/L.

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APPROVED BY: JLR
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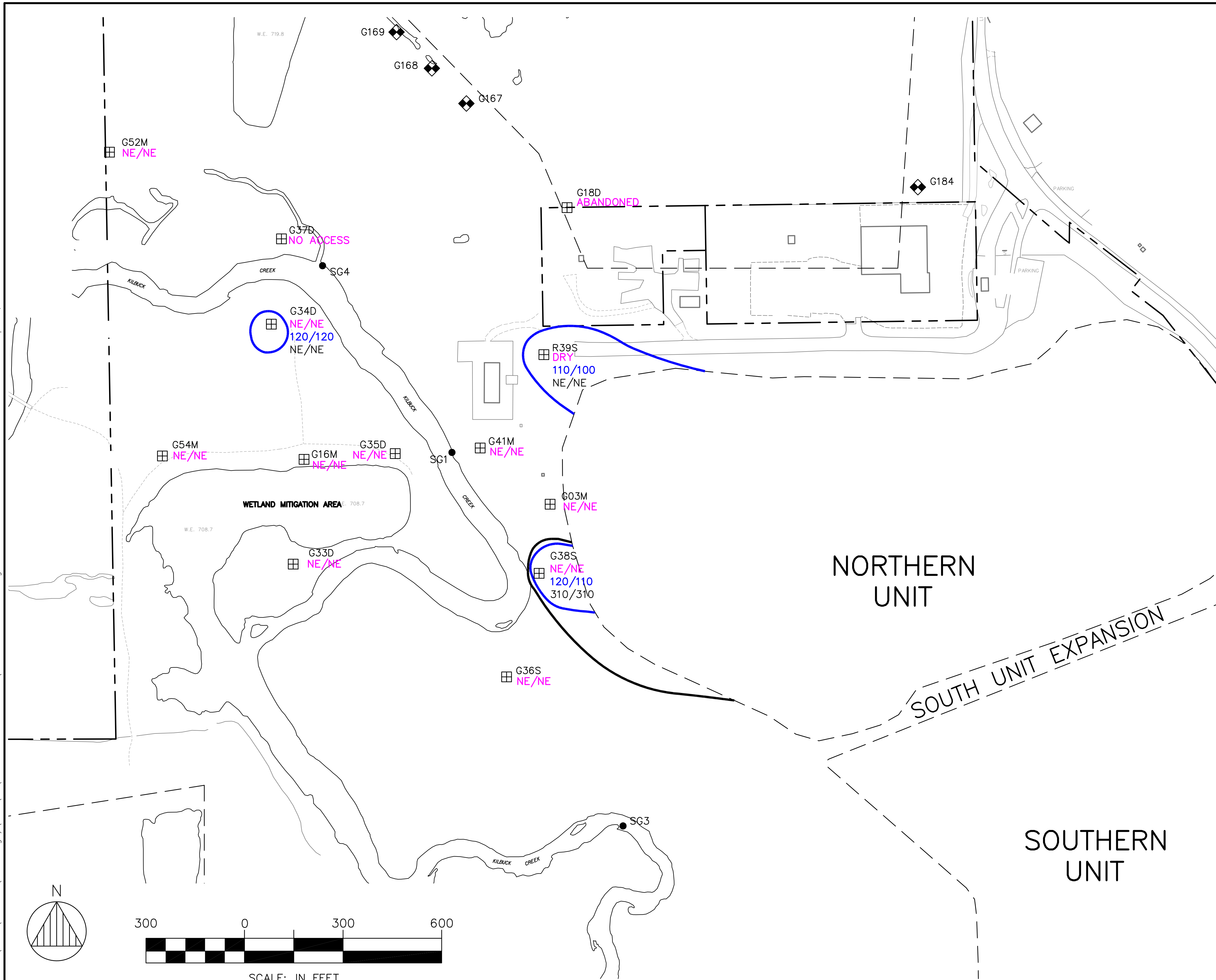
DRAWN BY: WCU

1ST QUARTER 2012
BORON EXCEEDENCES - LOWER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: H-3

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: FIG 3 User: wulewicz Plotted: Apr 11, 2012 - 10:28 AM



EXPLANATION

2012 CONCENTRATIONS OF CHLORIDE (mg/L)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
3.5/5.7	2007 CONCENTRATION DISSOLVED/TOTAL
4.5/6.7	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF CHLORIDE EXCEEDENCE
	2007 ESTIMATED EXTENT OF CHLORIDE EXCEEDENCE
	2004 ESTIMATED EXTENT OF CHLORIDE EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37D INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. AGQS FOR DISSOLVED/TOTAL CHLORIDE = 87.51/87.51 mg/L.

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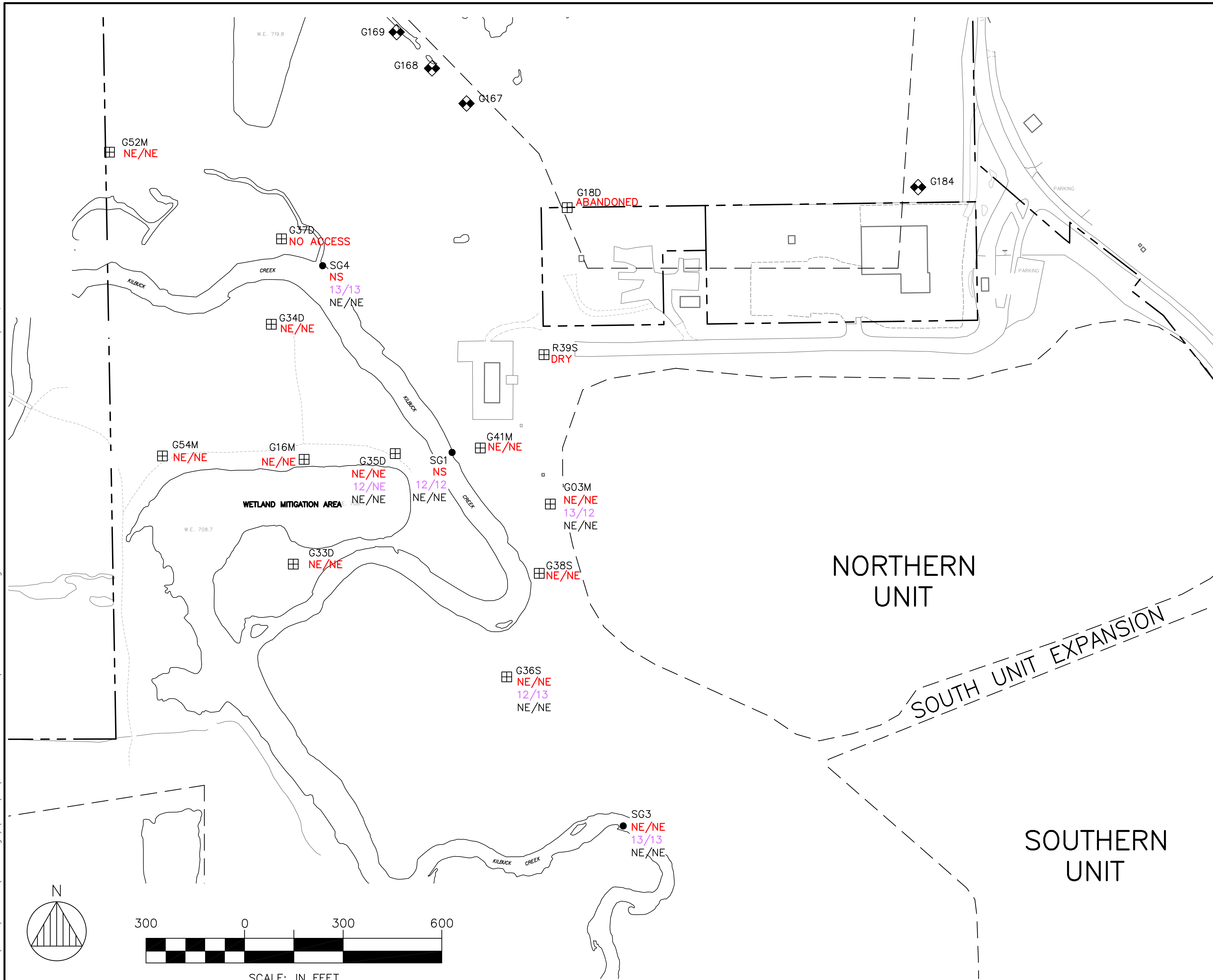
APPROVED BY: JLR

1ST QUARTER 2012
CHLORIDE EXCEEDENCES - LOWER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: H-4

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: FIG 4 User: wulewicz Plotted: Apr 11, 2012 - 10:28 AM



EXPLANATION

2012 CONCENTRATIONS OF NITRATE (mg/L)

10/20	2012 CONCENTRATION DISSOLVED/TOTAL
3.5/5.7	2007 CONCENTRATION DISSOLVED/TOTAL
4.5/6.7	2004 CONCENTRATION DISSOLVED/TOTAL
	NORTH EXPANSION UNIT MONITORING WELL
	SOUTHERN UNIT MONITORING WELL
	NORTHERN UNIT GMZ MONITORING WELL
	2012 ESTIMATED EXTENT OF NITRATE EXCEEDENCE
	2007 ESTIMATED EXTENT OF NITRATE EXCEEDENCE
	2004 ESTIMATED EXTENT OF NITRATE EXCEEDENCE

NOTES:

1. NE = NO EXCEEDENCE
2. NS = NOT SAMPLED
3. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. G37D INACCESSIBLE AT TIME OF SAMPLING FIRST QUARTER 2012.
6. AGQS FOR DISSOLVED/TOTAL NITRATE = 11.74/11.74 mg/L.

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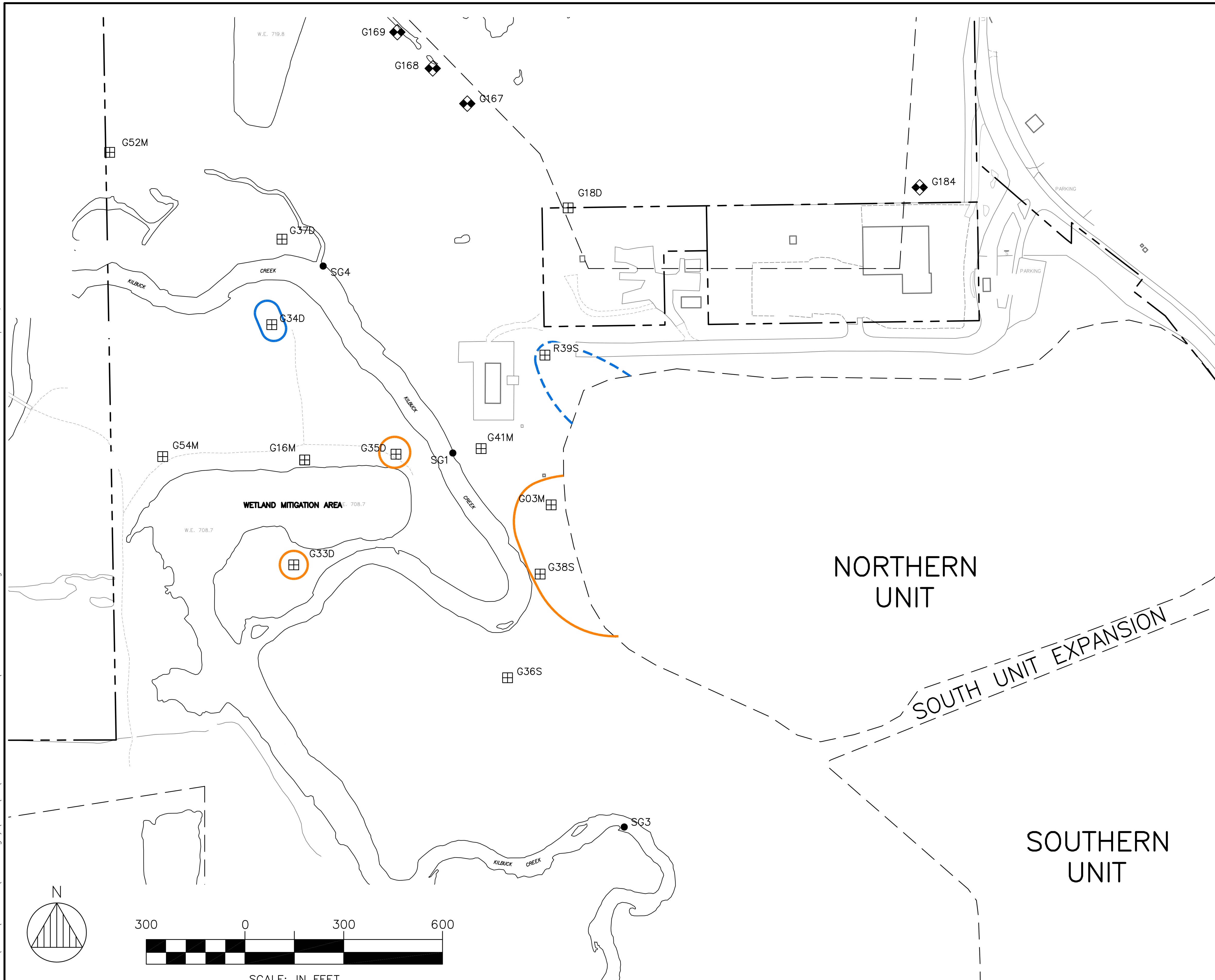
1ST QUARTER 2012
NITRATE EXCEEDENCES – LOWER ZONE
PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: H-5

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: FIG 5 User: wulewicz Plotted: Apr 11, 2012 – 10:29 AM



EXPLANATION

- SOUTHERN UNIT MONITORING WELL
- NORTHERN UNIT GMZ MONITORING WELL
- NORTH EXPANSION UNIT MONITORING WELL
- 2012 ESTIMATED EXTENT OF AMMONIA EXCEEDENCE
- 2012 ESTIMATED EXTENT OF ARSENIC EXCEEDENCE
- 2012 ESTIMATED EXTENT OF BORON EXCEEDENCE
- 2012 ESTIMATED EXTENT OF CHLORIDE EXCEEDENCE
- 2012 ESTIMATED EXTENT OF NITRATE EXCEEDENCE

NOTES:

1. DRAWING ONLY DEPICTS CONCENTRATIONS THAT EXCEED THE AGQS.
2. NE = NO EXCEEDENCE
3. SGX = SURFACE WATER COLLECTION POINT
4. HORIZONTAL DATUM BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM, 1927.
5. ESTIMATED EXTENT OF EXCEEDENCE IS DASHED WHERE INFERRED DUE TO DRY CONDITIONS AT TIME OF SAMPLING.

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DESIGNED BY: JLR
APPROVED BY: JLR

2012 COMPOSITE EXCEEDENCES - LOWER ZONE

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2012
PROJECT ID: 90-114
SHEET NUMBER: H-6

File: J:\1990\90-114 (Winnebago)\DWG\K1\2012 GMZ EVAL DWGS\GMZ_LOWER ZONE.dwg Tab: FIG 6 User: wulewicz Plotted: Apr 11, 2012 - 10:29 AM